

GenCore version 4.5
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OM nucleic - nucleic search, using sw model

Run on: February 7, 2002, 11:08:54 ; Search time 3842.15 Seconds
(without alignments)
1764.726 Million cell updates/sec

Title: US-09-394-745-6603
Perfect score: 411
Sequence: 1 agcaaaagcatagagatcca.....aggagaagaggaagggaccg 411

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 1472140 seqs, 8248589755 residues

Total number of hits satisfying chosen parameters: 2944280

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : GenEmbl:*
1: gb_ba:*
2: gb_htg:*
3: gb_in:*
4: gb_om:*
5: gb_ov:*
6: gb_pat:*
7: gb_ph:*
8: gb_pl:*
9: gb_pr:*
10: gb_ro:*
11: gb_sts:*
12: gb_sy:*
13: gb_un:*
14: gb_vi:*
15: em_ba:*
16: em_fun:*
17: em_hum:*
18: em_in:*
19: em_om:*
20: em_or:*
21: em_ov:*
22: em_pat:*
23: em_ph:*
24: em_pl:*
25: em_ro:*
26: em_sts:*
27: em_sy:*

28: em_un:*
 29: em_vi:*
 30: em_htgo_hum:*
 31: em_htgo_inv:*
 32: em_htgo_rod:*
 33: em_htg_hum:*
 34: em_htg_inv:*
 35: em_htg_rod:*
 36: em_htg_other:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result	% Query					Description
	No.	Score	Match	Length	ID	
c	1	45	10.9	2217	3 SAHNRNPH	X54670 S. american
c	2	42.4	10.3	27570	2 AC069197	AC069197 Homo sapi
c	3	42.2	10.3	76734	2 AC023218	AC023218 Homo sapi
	4	41.4	10.1	45313	1 SCD95A	AL357432 Streptomy
	5	41.2	10.0	60609	2 AC023519	AC023519 Homo sapi
c	6	40.8	9.9	102242	2 AP004043	AP004043 Oryza sat
c	7	40.8	9.9	125118	2 AP003865	AP003865 Oryza sat
c	8	40.2	9.8	3338	9 AF233344	AF233344 Homo sapi
c	9	40.2	9.8	179004	2 AC009988	AC009988 Homo sapi
	10	39.8	9.7	11096	1 AF275943	AF275943 Streptomy
c	11	39.8	9.7	56494	2 AC083782	AC083782 Homo sapi
c	12	39.6	9.6	36734	1 SC6G10	AL049497 Streptomy
c	13	39.6	9.6	78220	2 AC023212	AC023212 Homo sapi
c	14	39.2	9.5	54450	2 AC080179	AC080179 Homo sapi
c	15	39	9.5	11070	1 AE005747	AE005747 Caulobact
	16	39	9.5	19791	1 SPFKBAD	Y10438 Streptomyce
c	17	39	9.5	110000	2 HSS171M_2	Continuation (3 of
c	18	39	9.5	340000	9 HS21C102	AL163302 Homo sapi
c	19	38.8	9.4	63121	2 AC036107	AC036107 Homo sapi
	20	38.6	9.4	198218	2 AC037447	AC037447 Homo sapi
	21	38.4	9.3	158063	9 AP001046	AP001046 Homo sapi
c	22	38.4	9.3	179556	2 AC018734	AC018734 Homo sapi
c	23	38.4	9.3	219278	2 AC016018	AC016018 Mus muscu
	24	38.4	9.3	340000	9 AP001751	AP001751 Homo sapi
	25	38.2	9.3	2378	1 AF184600	AF184600 Streptomy
	26	38.2	9.3	2507	10 RATVGFA	M74223 Rat VGF mRN
	27	38.2	9.3	68902	2 AC091585	AC091585 Homo sapi
c	28	38	9.2	67477	2 AC055848	AC055848 Homo sapi
	29	38	9.2	87076	9 AC005918	AC005918 Homo sapi
c	30	37.8	9.2	220469	2 AC074307	AC074307 Mus muscu
	31	37.6	9.1	83393	2 AC087331_3	Continuation (4 of
	32	37.4	9.1	28732	1 AF082100	AF082100 Streptomy
	33	37.2	9.1	141279	2 AC023824	AC023824 Homo sapi
c	34	37.2	9.1	298166	2 AC087563	AC087563 Homo sapi
c	35	37	9.0	10986	1 AE003962	AE003962 Xylella f
c	36	37	9.0	15776	1 AE007069	AE007069 Mycobacte
	37	37	9.0	19830	1 SC3F9	AL023862 Streptomy
c	38	37	9.0	37586	1 MTCY270	Z95388 Mycobacteri

c	39	37	9.0	37586	6	AX191745	AX191745 Sequence
c	40	37	9.0	76336	2	AC023249	AC023249 Homo sapi
c	41	37	9.0	223940	2	AC087567	AC087567 Mus muscu
	42	36.8	9.0	9963	1	AE005878	AE005878 Caulobact
	43	36.8	9.0	63449	2	AC026976	AC026976 Homo sapi
	44	36.8	9.0	82024	2	AC023210	AC023210 Homo sapi
c	45	36.8	9.0	163275	2	AC007623	AC007623 Homo sapi

ALIGNMENTS

RESULT 1

SAHNRNPH/c

LOCUS SAHNRNPH 2217 bp mRNA INV 04-MAR-1991

DEFINITION S. americana hnRNP mRNA for protein homologous to A1, A2/B1 proteins of mammalian hnRNP.

ACCESSION X54670

VERSION X54670.1 GI:10106

KEYWORDS hnRNP A1 protein; hnRNP A2/B1 protein; hnRNP protein.

SOURCE American grasshopper.

ORGANISM Schistocerca americana

Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta; Pterygota; Neoptera; Orthopteroidea; Orthoptera; Caelifera; Acridomorpha; Acridoidea; Acrididae; Schistocerca.

REFERENCE 1 (bases 1 to 2217)

AUTHORS Ball,E.E.

TITLE Direct Submission

JOURNAL Submitted (29-AUG-1990) Ball E.E., Australian National University, Molecular Neurobiology Group RSBS, P O Box 475, Canberra City A.C.T. 2601, Australia

REFERENCE 2 (bases 1 to 2217)

AUTHORS Ball,E.E., Rehm,E.J. and Goodman,C.S.

TITLE Cloning of a grasshopper cDNA coding for a protein homologous to the A1, A2/B1 proteins of mammalian hnRNP

JOURNAL Nucleic Acids Res. 19 (2), 397 (1991)

MEDLINE 91195067

FEATURES Location/Qualifiers

source 1. .2217

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/db_xref="taxon:7009"

/dev_stage="35-50% embryo"

/clone_lib="gt11"

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gene 94. .2217

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CDS 94. .1122

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/codon_start=1

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/protein_id="CAA38481.1"

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/translation="MVNMDRENDHGEPEHVRKLFIGGLDYRTTDESLKQHFQWGEIV"

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SAGGGGGGGWGGADPWENGRGGGGDRWGGGGGGMGGGDRWGGGGGGMGGGDRYGGGGGR
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/note="containing RNP CS#1"
/bound_moiety="RNA"

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/note="RNP CS#1"

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/note="containing RNP CS#2"
/bound_moiety="RNA"

misc_feature 538. .561
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/note="RNP CS#2"

BASE COUNT 592 a 354 c 629 g 642 t
ORIGIN

Query Match 10.9%; Score 45; DB 3; Length 2217;
Best Local Similarity 51.8%; Pred. No. 0.16;
Matches 102; Conservative 0; Mismatches 95; Indels 0; Gaps 0;

Qy 73 cctagcgataccaatacacccatcccaacactccaaaccaaccaacacttcaaccaaacc 132
|| | || ||| || |||| |||| | || |||| ||| | || | |||

Db 891 CCCTCCCATTCCACCACCCCCACCCACCTATCTCCACCACCCATACCGCCACCACCACC 832

Qy 133 accacaacaatgccttcagtaacccaggcccgctctcatgtggcgtagcgtcgcccgcggc 192
|| || | | | | ||| |||| |||| ||| ||| | ||| | |

Db 831 TCCCCATCGGTACCGCCACCACCACGGCCATTCTCCCATGGATCAGCACCTCCCCAGCC 772

Qy 193 atggtagagccccaccccttcgctcgcaatcccatcaccatgacccctcacgcctggcgcc 252
| || | || | || | || || |||| | || | | | |

Db 771 ACCACCTCCACCGCCACCAGCACTTCCACCCAGTCACCACGTCCTCCGCCCCAGCCACC 712

Qy 253 gccgccgacctctccaa 269
|| || | | ||||

Db 711 ACCTGCGCCACCACCAA 695

RESULT 2
AC069197/c
LOCUS AC069197 27570 bp DNA HTG 17-FEB-2001
DEFINITION Homo sapiens chromosome 15 clone RP11-505I24 map 15, LOW-PASS
SEQUENCE SAMPLING.
ACCESSION AC069197
VERSION AC069197.3 GI:12958076
KEYWORDS HTG; HTGS_PHASE0.

SOURCE human.

ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 27570)

AUTHORS Birren,B., Linton,L., Nusbaum,C. and Lander,E.

TITLE Homo sapiens chromosome 15, clone RP11-505I24

JOURNAL Unpublished

REFERENCE 2 (bases 1 to 27570)

AUTHORS Birren,B., Linton,L., Nusbaum,C., Lander,E., Abraham,H., Allen,N.,
Anderson,S., Baldwin,J., Barna,N., Bastien,V., Beda,F.,
Boguslavkiy,L., Boukhgalter,B., Brown,A., Burkett,G.,
Campopiano,A., Castle,A., Choepel,Y., Colangelo,M., Collins,S.,
Collymore,A., Cooke,P., DeArellano,K., Dewar,K., Diaz,J.S.,
Dodge,S., Domino,M., Doyle,M., Ferreira,P., FitzHugh,W., Gage,D.,
Galagan,J., Gardyna,S., Ginde,S., Goyette,M., Graham,L.,
Grand-Pierre,N., Grant,G., Hagos,B., Heaford,A., Horton,L.,
Howland,J.C., Iliev,I., Johnson,R., Jones,C., Kann,L., Karatas,A.,
Klein,J., LaRocque,K., Lamazares,R., Landers,T., Lehoczky,J.,
Levine,R., Lieu,C., Liu,G., Locke,K., Macdonald,P., Marquis,N.,
McCarthy,M., McEwan,P., McGurk,A., McKernan,K., McPheeters,R.,
Meldrim,J., Meneus,L., Mihova,T., Miranda,C., Mlenga,V., Morrow,J.,
Murphy,T., Naylor,J., Norman,C.H., O'Connor,T., O'Donnell,P.,
O'Neil,D., Olivar,T.M., Oliver,J., Peterson,K., Pierre,N.,
Pisani,C., Pollara,V., Raymond,C., Riley,R., Rogov,P., Rothman,D.,
Roy,A., Santos,R., Schauer,S., Severy,P., Spencer,B.,
Stange-Thomann,N., Stojanovic,N., Subramanian,A., Talamas,J.,
Tesfaye,S., Theodore,J., Tirrell,A., Travers,M., Trigilio,J.,
Vassiliev,H., Viel,R., Vo,A., Wilson,B., Wu,X., Wyman,D., Ye,W.J.,
Young,G., Zainoun,J., Zimmer,A. and Zody,M.

TITLE Direct Submission

JOURNAL Submitted (21-MAY-2000) Whitehead Institute/MIT Center for Genome
Research, 320 Charles Street, Cambridge, MA 02141, USA

COMMENT On Feb 17, 2001 this sequence version replaced gi:11120926.
All repeats were identified using RepeatMasker:
Smit, A.F.A. & Green, P. (1996-1997)
<http://ftp.genome.washington.edu/RM/RepeatMasker.html>
----- Genome Center
Center: Whitehead Institute/ MIT Center for Genome Research
Center code: WIBR
Web site: <http://www-seq.wi.mit.edu>
Contact: sequence_submissions@genome.wi.mit.edu
----- Project Information
Center project name: L9315
Center clone name: 505_I_24

* NOTE: This record contains 34 individual
* sequencing reads that have not been assembled into
* contigs. Runs of N are used to separate the reads
* and the order in which they appear is completely
* arbitrary. Low-pass sequence sampling is useful for
* identifying clones that may be gene-rich and allows
* overlap relationships among clones to be deduced.
* However, it should not be assumed that this clone
* will be sequenced to completion. In the event that
* the record is updated, the accession number will
* be preserved.

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*      720 819: gap of      100 bp
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*     3233     3971: contig of 739 bp in length
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*     4819 4918: gap of      100 bp
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*    16192 16291: gap of      100 bp
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*    17000 17099: gap of      100 bp
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*    19559    20275: contig of 717 bp in length
*    20276 20375: gap of      100 bp
*    20376    21104: contig of 729 bp in length
*    21105 21204: gap of      100 bp
*    21205    21938: contig of 734 bp in length
*    21939 22038: gap of      100 bp
*    22039    22756: contig of 718 bp in length
*    22757 22856: gap of      100 bp
*    22857    23573: contig of 717 bp in length

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FEATURES                                Location/Qualifiers
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                                         /db_xref="taxon:9606"
                                         /chromosome="15"
                                         /map="15"
                                         /clone="RP11-505I24"
                                         /clone_lib="RPCI-11 Human Male BAC"
BASE COUNT      7225 a    4533 c    5245 g    7049 t    3518 others
ORIGIN

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Query Match 10.3%; Score 42.4; DB 2; Length 27570;
Best Local Similarity 50.5%; Pred. No. 0.72;
Matches 97; Conservative 0; Mismatches 95; Indels 0; Gaps 0;

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Qy      76 agcgataccaatacaccccatcccaacactccaaaccaaccaacttcaaccaaaccacc 135
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Qy      136 acaacaatgccttcagtaacccaggcccggtctcatgtggcgtagcgctcgcccgggcatg 195
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Db 25880 AAACCACCACCCACCCACCCACCCACCCACCCACCCACCCACCCACCCACCCACCCACCCACCC 25821

Qy      196 gtagagccccacccttcgctcgcaatcccatcaccatgacccctcaagcctggcgcgcc 255
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Db 25760 CCCCCCCCCCCCC 25749

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RESULT      3
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LOCUS       AC023218       76734 bp       DNA             HTG             13-JUL-2000
DEFINITION  Homo sapiens chromosome 14 clone RP11-105M4 map 14, LOW-PASS
            SEQUENCE SAMPLING.
ACCESSION   AC023218
VERSION     AC023218.2   GI:9165238
KEYWORDS    HTG; HTGS_PHASE0.
SOURCE      human.
            ORGANISM      Homo sapiens
                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                        Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1 (bases 1 to 76734)
AUTHORS     Birren,B., Linton,L., Nusbaum,C. and Lander,E.

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TITLE Homo sapiens chromosome 14, clone RP11-105M4
 JOURNAL Unpublished
 REFERENCE 2 (bases 1 to 76734)
 AUTHORS Birren,B., Linton,L., Nusbaum,C., Lander,E., Abraham,H., Allen,N.,
 Anderson,S., Baldwin,J., Barna,N., Beckerly,R., Beda,F.,
 Boguslavkiy,L., Boukhgalter,B., Brown,A., Burkett,G., Castle,A.,
 Choepel,Y., Colangelo,M., Collins,S., Collymore,A., Cooke,P.,
 DeArellano,K., Dewar,K., Domino,M., Doyle,M., Fenestor,J.,
 Ferreira,P., FitzHugh,W., Forrest,C., Gage,D., Galagan,J.,
 Gardyna,S., Grant,G., Hagos,B., Heaford,A., Horton,L.,
 Howland,J.C., Johnson,R., Jones,C., Kann,L., Karatas,A., Klein,J.,
 Landers,T., Lehoczký,J., Levine,R., Lieu,C., Liu,G., Locke,K.,
 Macdonald,P., Marquis,N., McEwan,P., McGurk,A., McKernan,K.,
 McPheeters,R., Meldrim,J., Meneus,L., Morrow,J., Naylor,J.,
 Norman,C.H., O'Connor,T., O'Donnell,P., Olivar,T.M., Peterson,K.,
 Pierre,N., Pisani,C., Pollara,V., Raymond,C., Riley,R., Rothman,D.,
 Roy,A., Santos,R., Severy,P., Spencer,B., Stange-Thomann,N.,
 Stojanovic,N., Subramanian,A., Talamas,J., Tesfaye,S., Theodore,J.,
 Tirrell,A., Vassiliev,H., Viel,R., Vo,A., Wu,X., Wyman,D., Ye,W.J.,
 Zimmer,A. and Zody,M.

TITLE Direct Submission
 JOURNAL Submitted (09-FEB-2000) Whitehead Institute/MIT Center for Genome
 Research, 320 Charles Street, Cambridge, MA 02141, USA
 COMMENT On Jul 13, 2000 this sequence version replaced gi:6957752.

All repeats were identified using RepeatMasker:
 Smit, A.F.A. & Green, P. (1996-1997)
<http://ftp.genome.washington.edu/RM/RepeatMasker.html>

----- Genome Center
 Center: Whitehead Institute/ MIT Center for Genome Research
 Center code: WIBR
 Web site: <http://www-seq.wi.mit.edu>
 Contact: sequence_submissions@genome.wi.mit.edu

----- Project Information

Center project name: L6632
 Center clone name: 105_M_4

* NOTE: This record contains 81 individual
 * sequencing reads that have not been assembled into
 * contigs. Runs of N are used to separate the reads
 * and the order in which they appear is completely
 * arbitrary. Low-pass sequence sampling is useful for
 * identifying clones that may be gene-rich and allows
 * overlap relationships among clones to be deduced.
 * However, it should not be assumed that this clone
 * will be sequenced to completion. In the event that
 * the record is updated, the accession number will
 * be preserved.

* 1 871: contig of 871 bp in length
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 * 972 1838: contig of 867 bp in length
 * 1839 1938: gap of 100 bp
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 * 2905 3736: contig of 832 bp in length
 * 3737 3836: gap of 100 bp
 * 3837 4667: contig of 831 bp in length
 * 4668 4767: gap of 100 bp


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*      4768      5627: contig of 860 bp in length
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*     18859 18958: gap of      100 bp
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*     19782 19881: gap of      100 bp
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*     20730 20829: gap of      100 bp
*     20830     21737: contig of 908 bp in length
*     21738 21837: gap of      100 bp
*     21838     22684: contig of 847 bp in length
*     22685 22784: gap of      100 bp
*     22785     23640: contig of 856 bp in length
*     23641 23740: gap of      100 bp
*     23741     24566: contig of 826 bp in length
*     24567 24666: gap of      100 bp
*     24667     25519: contig of 853 bp in length
*     25520 25619: gap of      100 bp
*     25620     26478: contig of 859 bp in length
*     26479 26578: gap of      100 bp
*     26579     27434: contig of 856 bp in length
*     27435 27534: gap of      100 bp
*     27535     28406: contig of 872 bp in length
*     28407 28506: gap of      100 bp
*     28507     29351: contig of 845 bp in length
*     29352 29451: gap of      100 bp
*     29452     30292: contig of 841 bp in length
*     30293 30392: gap of      100 bp
*     30393     31253: contig of 861 bp in length
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* 32179 32278: gap of 100 bp
* 32279 33145: contig of 867 bp in length
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* 33246 34087: contig of 842 bp in length
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* 34188 35016: contig of 829 bp in length
* 35017 35116: gap of 100 bp
* 35117 35991: contig of 875 bp in length
* 35992 36091: gap of 100 bp
* 36092 36956: contig of 865 bp in length
* 36957 37056: gap of 100 bp
* 37057 37883: contig of 827 bp in length
* 37884 37983: gap of 100 bp
* 37984 38833: contig of 850 bp in length
* 38834 38933: gap of 100 bp
* 38934 39774: contig of 841 bp in length
* 39775 39874: gap of 100 bp
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* 40727 40826: gap of 100 bp
* 40827 41689: contig of 863 bp in length
* 41690 41789: gap of 100 bp
* 41790 42592: contig of 803 bp in length
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* 46500 47373: contig of 874 bp in length
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* 57841 58694: contig of 854 bp in length
* 58695 58794: gap of 100 bp

* 58795 59619: contig of 825 bp in length
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 * 60667 61514: contig of 848 bp in length
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 * 61615 62461: contig of 847 bp in length
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 * 62562 63399: contig of 838 bp in length
 * 63400 63499: gap of 100 bp
 * 63500 64332: contig of 833 bp in length
 * 64333 64432: gap of 100 bp
 * 64433 65278: contig of 846 bp in length
 * 65279 65378: gap of 100 bp
 * 65379 66237: contig of 859 bp in length
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Query Match 10.3%; Score 42.2; DB 2; Length 76734;
 Best Local Similarity 46.8%; Pred. No. 0.79;
 Matches 125; Conservative 0; Mismatches 142; Indels 0; Gaps 0;

Qy 1 agcaaaagcatagagatccatcttctctgctcaatcaattacacaacaagagcattctag 60
 | | | | | | | | | | | | | | | | | | | | | |
 Db 21681 ACCCATAACATCCCCACCACANATAACAACCTAATAACCCACTCCCCTCCACCCTCTCAC 21622
 Qy 61 atttgagttcatccttagcgataccaatacacccatcccaacactccaaaccaaccaacac 120
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 Db 21621 CCCTCAAAACACCCACCCCAAACACACCCATCACACCCAACACTACCAATCTACCAACCA 21562
 Qy 121 ttcaaccaaaccaccacacaacaatgccttcagtaaccaggcccggtctcatgtggcgtagc 180
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 Db 21561 TCGAAACCCACCCCCAANACCACNCCACAACACCCNCCACACCAACTAATCTACCTAATC 21502
 Qy 181 gtcgcccgcggcatggtagagccccacccttcgctcgcaatcccatcaccatgaccct 240
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 Db 21501 CCTCTCCCCATCACTCACTACCACACACCCACCCTTCTCACCCCCCCTCCCACACCCCC 21442
 Qy 241 cacgcctggcgcgccgacgtctcc 267
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 Db 21441 CCCCCCATCCCCACCCACACACCCCC 21415

RESULT 4
 SCD95A
 LOCUS SCD95A 45313 bp DNA BCT 31-MAY-2000
 DEFINITION Streptomyces coelicolor cosmid D95A.
 ACCESSION AL357432
 VERSION AL357432.1 GI:8248766
 KEYWORDS acetyltransferase; ATP/GTP binding protein; carboxylesterase;
 chaperonin 2; cold shock protein; deacetylase; DNA-binding protein;
 helicase; histidine autokinase; homeostasis protein; integral
 membrane protein; metalloproteinase; mutT-like protein;
 NADP-dependent alcohol dehydrogenase; oxidoreductase; phosphatase;
 possible trehalose-phosphate synthase; reductase; regulatory
 protein; response regulatory protein; secreted protein; secreted
 solute-binding protein; sugar kinase; threonine synthase;

transcriptional regulator.

SOURCE Streptomyces coelicolor A3(2).

ORGANISM Streptomyces coelicolor A3(2)
Bacteria; Firmicutes; Actinobacteria; Actinobacteridae;
Actinomycetales; Streptomycineae; Streptomycetaceae; Streptomyces.

REFERENCE 1 (bases 1 to 45313)

AUTHORS Redenbach,M., Kieser,H.M., Denapaite,D., Eichner,A., Cullum,J.,
Kinashi,H. and Hopwood,D.A.

TITLE A set of ordered cosmids and a detailed genetic and physical map
for the 8 Mb Streptomyces coelicolor A3(2) chromosome

JOURNAL Mol. Microbiol. 21 (1), 77-96 (1996)

MEDLINE 97000351

REFERENCE 2 (bases 1 to 45313)

AUTHORS Seeger,K.J. and Harris,D.

JOURNAL Unpublished

REFERENCE 3 (bases 1 to 45313)

AUTHORS Cerdeno,A.M., Parkhill,J., Barrell,B.G. and Rajandream,M.A.

TITLE Direct Submission

JOURNAL Submitted (31-MAY-2000) Streptomyces coelicolor sequencing project,
Sanger Centre, Wellcome Trust Genome Campus, Hinxton, Cambridge
CB10 1SA E-mail: barrell@sanger.ac.uk Cosmids supplied by Prof.
David A. Hopwood, [3] John Innes Centre, Norwich Research Park,
Colney, Norwich, Norfolk NR4 7UH, UK

COMMENT Notes:
Streptomyces coelicolor sequencing at The Sanger Centre is funded
by the BBSRC and Beowulf Genomics
Details of S. coelicolor sequencing at the Sanger Centre are
available on the World Wide Web.
(URL; http://www.sanger.ac.uk/Projects/S_coelicolor/)
CDS are numbered using the following system eg SC7B7.01c. SC (S.
coelicolor), 7B7 (cosmid name), .01 (first CDS), c (complementary
strand).
The more significant matches with motifs in the PROSITE database
are also included but some of these may be fortuitous.
The length in codons is given for each CDS.
Usually the highest scoring match found by fasta -o is given for
CDS which show significant similarity to other CDS in the database.
The position of possible ribosome binding site sequences are given
where these have been used to deduce the initiation codon.
Gene prediction is based on positional base preference in codons
using a specially developed Hidden Markov Model (Krogh et al.,
Nucleic Acids Research, 22(22):4768-4778(1994)) and the FramePlot
program of Bibb et al., Gene 30:157-66(1984) as implemented at
<http://www.nih.go.jp/jun/cgi-bin/frameplot.pl>. CAUTION: We may not have predicted the
correct initiation codon. Where possible we choose an initiation
codon (atg, gtg, ttg or (att)) which is preceded by an upstream
ribosome binding site sequence (optimally 5-13bp before the
initiation codon). If this cannot be identified we choose the most
upstream initiation codon.
IMPORTANT: This sequence MAY NOT be the entire insert of the
sequenced clone. It may be shorter because we only sequence
overlapping sections once, or longer, because we arrange for a
small overlap between neighbouring submissions.
Cosmid D95A lies between and overlaps cosmids D86A and D12A on the
AseI-D genomic restriction fragment.

FEATURES Location/Qualifiers

source 1. .45313
 /organism="Streptomyces coelicolor A3(2)"
 /strain="A3(2)"
 /db_xref="taxon:100226"
 /clone="cosmid D95A"
 gene 1. .79
 /gene="SCD95A.01"
 misc_feature 1. .105
 /note="nominal overlap with Streptomyces coelicolor cosmid StD86A"
 CDS <1. .79
 /gene="SCD95A.01"
 /note="SCD95A.01, unknown (fragment), len: >25 aa"
 /codon_start=2
 /transl_table=11
 /product="hypothetical protein SCD95A.01"
 /protein_id="CAB93028.1"
 /db_xref="GI:8248767"
 /translation="ISPTQLLDLAPVLAELGVRVLGEE"
 gene complement(91. .591)
 /gene="SCD95A.02c"
 CDS complement(91. .591)
 /gene="SCD95A.02c"
 /note="SCD95A.02c, unknown, len: 166 aa"
 /codon_start=1
 /transl_table=11
 /product="hypothetical protein SCD95A.02c"
 /protein_id="CAB93029.1"
 /db_xref="GI:8248768"
 /translation="MLDIGYALSTRFPDPPTDYRRADVHALRHDLFCGDVYLADTKA
 DRELSTAWGWVPVLDFAWALCDIVEQVDRDPAGSRAARPQRAELDFTESTDRLLFERR
 FGWVDIEAEWLPADEPPLSFSHTELRREARDFLHDLADLTDLHEDLADNPVWSLQA
 RFPRIP"
 gene complement(775. .1374)
 /gene="SCD95A.03c"
 CDS complement(775. .1374)
 /gene="SCD95A.03c"
 /note="SCD95A.03c, possible transcriptional regulator,
 len: 199 aa; similar to TR:CAB53122 (EMBL:AL109962)
 Streptomyces coelicolor putative transcriptional
 regulatory protein SCJ1.04, 207 aa; fasta scores: opt: 154
 z-score: 202.7 E(): 0.00079; 36.4% identity in 77 aa
 overlap. Contains Pfam match to entry PF00440 tetR,
 Bacterial regulatory proteins, tetR family"
 /codon_start=1
 /transl_table=11
 /product="putative transcriptional regulator"
 /protein_id="CAB93030.1"
 /db_xref="GI:8248769"
 /translation="MPDRTPDQPLTSRGAATHRRILDVATREFAEHGIAGARVERIVA
 AARTNKAQLYAYFGSKDGLFDAIFFGSLDRIVNVVPIDADDLADWAVRLYDEYLCRPD
 LIRLATWARLERRPAGHLVDDADRRDDAKLRAVAEAQAAGRVRPGDPFDVLALVIAMS
 MAWSPVSNVYAATADEPDDVHERRRALLRDAVRRATAPD"
 misc_feature complement(1174. .1314)
 /gene="SCD95A.03c"
 /note="Pfam match to entry PF00440 tetR, Bacterial
 regulatory proteins, tetR family, score 34.80, E-value

6.3e-08"

RBS complement(1375. .1378)

RBS 1480. .1485

gene 1490. .2626
/gene="SCD95A.04"

CDS 1490. .2626
/gene="SCD95A.04"
/note="SCD95A.04, probable NADP-dependent alcohol dehydrogenase, len: 378 aa; similar to SW:ADH_MYCTU (EMBL:AL021287) Mycobacterium tuberculosis NADP-dependent alcohol dehydrogenase (EC 1.1.1.2) Adh, 346 aa; fasta scores: opt: 986 z-score: 1074.5 E(): 0; 45.0% identity in 349 aa overlap. Contains Pfam match to entry PF00107 adh_zinc, Zinc-binding dehydrogenases and match to Prosite entry PS00059 Zinc-containing alcohol dehydrogenases signature"
/codon_start=1
/transl_table=11
/product="putative NADP-dependent alcohol dehydrogenase"
/protein_id="CAB93031.1"
/db_xref="GI:8248770"
/translation="MRTTVGWQATGPTLRRAPLERRDLRPDDLAVRVVDYCGVCHTDLH AVRAGAADGSGPRPLVPGHEFTGVVTETGTAVTRFRPGDPVAVGNIVDSCGTCAMCRI GQENFCHSFPTLTYYGGTDRRDGSTTLGGYSREYVLGERFAYALPAALDPAAAPLLCA GITVWEPLRALGAGPGRVAVAGLGGLGHLAVKLAVALGADTSVISRSPDKAEDARRL GARELVVSTDPERLAAARERFDIVVDTVSAPHDLGAYLRLVALDGTLSHLGHLGPVTV ETLDLLIGRKKLSSAGSGGRKGTAEMLAFCAEHGITADIELLPSARVNEALDRLDRGD VRHRFVLDSLSDLHSGPLDGLSDPSDPLRGPDRSGPQDPAAG"

misc_feature 1496. .2515
/gene="SCD95A.04"
/note="Pfam match to entry PF00107 adh_zinc, Zinc-binding dehydrogenases, score 299.10, E-value 5.5e-86"

misc_feature 1595. .1612
/gene="SCD95A.04"
/note="PS00190 Cytochrome c family heme-binding site signature"

misc_feature 1673. .1717
/gene="SCD95A.04"
/note="PS00059 Zinc-containing alcohol dehydrogenases signature"

gene 2636. .3607
/gene="SCD95A.05"

CDS 2636. .3607
/gene="SCD95A.05"
/note="SCD95A.05, possible mutT-like protein, len: 323 aa; similar to TR:O69888 (EMBL:AL023797) Streptomyces coelicolor hypothetical 19.4 kD protein SC2E1.17 or MutT, 172 aa; fasta scores: opt: 266 z-score: 322.5 E(): 1.7e-10; 39.3% identity in 145 aa overlap. Contains Pfam match to entry PF00293 mutT, Bacterial mutT protein and match to Prosite entry PS00893 mutT domain signature. High content in alanine and leucine amino acid residues"
/codon_start=1
/transl_table=11
/product="putative mutT-like protein"
/protein_id="CAB93032.1"
/db_xref="GI:8248771"

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/translation="MILTPLALTPDHDIPGPVLTALTALYASHRAFHALSGDFDPED
IRPEQVATALADELARPGAEVLLARDAGRLVGAVTLARHPDPSDPDWIGLLMVDAG
LTRQGHGSRLVSLVEDRFRAAGRTAVRLAVLDGNTDALSFWTALGYRVLDHRRDLGAE
RPCTVLRRELASDKPRTPRRAARVAVLDPEGAVFLLRYDNVEVG VHWAMPGGGLEADE
NPREGALREVREETGWTDLPGPLLCTWEHDFTHLSVGPVRQYEHYIYVAQGP RREPTG
PHLAAAHADGILTWRWWSRAELAEAPEPLWPPDLALLLETFGGREG"
misc_feature 3212. .3337
               /gene="SCD95A.05"
               /note="Pfam match to entry PF00293 mutT, Bacterial mutT
protein, score 33.50, E-value 4.1e-08"
misc_feature 3269. .3328
               /gene="SCD95A.05"
               /note="PS00893 mutT domain signature"
gene          complement(3632. .5053)
               /gene="SCD95A.06c"
CDS           complement(3632. .5053)
               /gene="SCD95A.06c"

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Query Match      10.1%; Score 41.4; DB 1; Length 45313;
Best Local Similarity 47.8%; Pred. No. 1.3;
Matches 120; Conservative 0; Mismatches 131; Indels 0; Gaps 0;

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Qy      90  acccatcccaacactccaaaccaacacacttcaaccaaaccaccacaacaatgccttc 149
           || |||||      | |  || |||  | || ||  | || |  | || |
Db  40284  ACTCATCCGGGACGCCTACCGCAGCCAGGCCGACAGCCTCCGCGCCGCCGCGTCCGG 40343

Qy     150  agtaaccaggcccggtctcatgtggcgtagcgtcgcccgcggcatggttagagccccaccc 209
           |      || |||| ||||| |      |||| | | | | | || | | | |
Db  40344  CGCCGACCTGGCCGGTCTCGCGCACGCCCTGCGCGCCTGGGCCCTCGACGACCCGCAGCG 40403

Qy     210  cttcgctcgcaatcccatcaccatgaccctcacgcctggcgcgccgacgtctccaa 269
           || |  | ||  | || | || | || | || | || | || | || | || |
Db  40404  CTACTTCCTCATCTTCGGTACCCCGTCCCGGCTACCGGGCGCCCGACGACATCACCGA 40463

Qy     270  gaaagtcgtgaagacaagcactgtcttcttcccttctatgcaggtatccttggatggcc 329
           || | || | |||| |  ||| || || | || || || | || | || |
Db  40464  GATCGCCGCCGAGACCATGGCGGTCATCGTCGACGCCTGTGCCGCACTGCCTCCGTCGGA 40523

Qy     330  agtcgcagccg 340
           | | | | |
Db  40524  CGGCACCGACG 40534

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RESULT      5
AC023519
LOCUS       AC023519      60609 bp      DNA           HTG           13-JUL-2000
DEFINITION  Homo sapiens clone RP11-16I22, LOW-PASS SEQUENCE SAMPLING.
ACCESSION  AC023519
VERSION    AC023519.2   GI:7144934
KEYWORDS   HTG; HTGS_PHASE0.
SOURCE     human.
ORGANISM   Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE  1 (bases 1 to 60609)
AUTHORS   Birren,B., Linton,L., Nusbaum,C. and Lander,E.
TITLE     Homo sapiens, clone RP11-16I22

```

JOURNAL Unpublished
REFERENCE 2 (bases 1 to 60609)
AUTHORS Birren,B., Linton,L., Nusbaum,C., Lander,E., Abraham,H., Allen,N.,
Anderson,S., Baldwin,J., Barna,N., Beda,F., Boguslavkiy,L.,
Boukhgalter,B., Brown,A., Burkett,G., Campopiano,A., Castle,A.,
Choepel,Y., Colangelo,M., Collins,S., Collymore,A., Cooke,P.,
DeArellano,K., Dewar,K., Dodge,S., Domino,M., Doyle,M.,
Fenestor,J., Ferreira,P., FitzHugh,W., Forrest,C., Gage,D.,
Galagan,J., Gardyna,S., Ginde,S., Goyette,M., Graham,L.,
Grand-Pierre,N., Grant,G., Hagos,B., Heaford,A., Horton,L.,
Howland,J.C., Iliev,I., Johnson,R., Jones,C., Kann,L., Karatas,A.,
Klein,J., Landers,T., Largocque,K., Lehoczký,J., Levine,R.,
Lieu,C., Liu,G., Locke,K., Macdonald,P., Marquis,N., McCarthy,M.,
McEwan,P., McGurk,A., McKernan,K., McPheeters,R., Meldrim,J.,
Meneus,L., Mihova,T., Miranda,C., Mlenga,V., Morrow,J., Naylor,J.,
Norman,C.H., O'Connor,T., O'Donnell,P., O'Neil,D., Olivar,T.M.,
Peterson,K., Pierre,N., Pisani,C., Pollara,V., Raymond,C.,
Riley,R., Rogov,P., Rothman,D., Roy,A., Santos,R., Schauer,S.,
Severy,P., Spencer,B., Stange-Thomann,N., Stojanovic,N.,
Subramanian,A., Talamas,J., Tesfaye,S., Theodore,J., Tirrell,A.,
Travers,M., Trigilio,J., Vassiliev,H., Viel,R., Vo,A., Wilson,B.,
Wu,X., Wyman,D., Ye,W.J., Young,G., Zainoun,J., Zimmer,A. and
Zody,M.

TITLE Direct Submission
JOURNAL Submitted (15-FEB-2000) Whitehead Institute/MIT Center for Genome
Research, 320 Charles Street, Cambridge, MA 02141, USA
COMMENT On Mar 3, 2000 this sequence version replaced gi:6978163.
All repeats were identified using RepeatMasker:
Smit, A.F.A. & Green, P. (1996-1997)
<http://ftp.genome.washington.edu/RM/RepeatMasker.html>
----- Genome Center
Center: Whitehead Institute/ MIT Center for Genome Research
Center code: WIBR
Web site: <http://www-seq.wi.mit.edu>
Contact: sequence_submissions@genome.wi.mit.edu
----- Project Information
Center project name: L3549
Center clone name: 16_I_22

* NOTE: This record contains 69 individual
* sequencing reads that have not been assembled into
* contigs. Runs of N are used to separate the reads
* and the order in which they appear is completely
* arbitrary. Low-pass sequence sampling is useful for
* identifying clones that may be gene-rich and allows
* overlap relationships among clones to be deduced.
* However, it should not be assumed that this clone
* will be sequenced to completion. In the event that
* the record is updated, the accession number will
* be preserved.
* 1 779: contig of 779 bp in length
* 780 879: gap of 100 bp
* 880 1683: contig of 804 bp in length
* 1684 1783: gap of 100 bp
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* 2598 2697: gap of 100 bp
* 2698 3494: contig of 797 bp in length

* 3495 3594: gap of 100 bp
 * 3595 4365: contig of 771 bp in length
 * 4366 4465: gap of 100 bp
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 * 6231 7007: contig of 777 bp in length
 * 7008 7107: gap of 100 bp
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* 28205 28987: contig of 783 bp in length
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 * 35908 36007: gap of 100 bp
 * 36008 36794: contig of 787 bp in length
 * 36795 36894: gap of 100 bp
 * 36895 37673: contig of 779 bp in length
 * 37674 37773: gap of 100 bp
 * 37774 38563: contig of 790 bp in length
 * 38564 38663: gap of 100 bp
 * 38664 39472: contig of 809 bp in length
 * 39473 39572: gap of 100 bp
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 * 41351 42103: contig of 753 bp in length
 * 42104 42203: gap of 100 bp
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 * 52808 53625: contig of 818 bp in length

* 53626 53725: gap of 100 bp
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 * 58958 59739: contig of 782 bp in length
 * 59740 59839: gap of 100 bp
 * 59840 60609: contig of 770 bp in length.

FEATURES Location/Qualifiers

Query Match 10.0%; Score 41.2; DB 2; Length 60609;
 Best Local Similarity 50.3%; Pred. No. 1.5;
 Matches 94; Conservative 0; Mismatches 93; Indels 0; Gaps 0;

Qy 82 accaatacacccatcccaacactccaaaccaacacacttcaaccaaaccaccacaaca 141
 ||| | ||| || ||| || | | || ||| | | || ||| | | | ||
 Db 49656 ACCCACACAACCCACCCACCCACCCACCCACCCACCCACCCACCCACCCACCCCA 49715
 Qy 142 atgccttcagtaaccaggcccggtctcatgtggcgtagcgctgcccgcggcatggtagag 201
 | || | || || ||| || | | | | || | || | || |
 Db 49716 ACCCCCCCTCCCACACACNCCCCCCCCCCCCACCACCCCNCAACCCCNACACCCACCA 49775
 Qy 202 cccacccccttcgctcgcaatcccatcaccatgacccctcacgcctggcgcgccgcccac 261
 ||||| || | ||| ||| ||| ||| | | | ||| || |
 Db 49776 CCCCACCCCCCACCTANCNCCCCACCACCCTCACCCCAAACCACCCACACCCCCCCC 49835
 Qy 262 ctctcca 268
 | | |||
 Db 49836 CCCACCA 49842

RESULT 6
 AP004043/c
 LOCUS AP004043 102242 bp DNA HTG 17-AUG-2001
 DEFINITION Oryza sativa chromosome 2 clone OJ1124_D06, *** SEQUENCING IN
 PROGRESS ***, in ordered pieces.
 ACCESSION AP004043
 VERSION AP004043.1 GI:15208411
 KEYWORDS HTG; HTGS_PHASE2.
 SOURCE Oryza sativa (cultivar:Nipponbare) DNA, clone:OJ1124_D06.
 ORGANISM Oryza sativa
 Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
 Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
 Ehrhartoideae; Oryzeae; Oryza.
 REFERENCE 1 (bases 1 to 102242)
 AUTHORS Sasaki,T., Matsumoto,T. and Yamamoto,K.
 TITLE Oryza sativa nipponbare(GA3) genomic DNA, chromosome 2, BAC
 clone:OJ1124_D06
 JOURNAL Published Only in Database (2001) In press

REFERENCE 2 (bases 1 to 102242)
 AUTHORS Sasaki,T., Matsumoto,T. and Yamamoto,K.
 TITLE Direct Submission
 JOURNAL Submitted (15-AUG-2001) Takuji Sasaki, National Institute of
 Agrobiological Resources, Rice Genome Research Program; Kannondai
 2-1-2, Tsukuba, Ibaraki 305-8602, Japan
 (E-mail:tsasaki@nias.affrc.go.jp, URL:http://rgp.dna.affrc.go.jp/,
 Tel:81-298-38-7441, Fax:81-298-38-7468)
 COMMENT The nucleotide sequence of this BAC clone was generated by
 combining Monsanto and RGP-Japan sequencing data.
 NOTE: It currently consists of 1 contigs. Gaps between the contigs
 are represented as runs of N. The order of the pieces is believed
 to be correct as given, however the sizes of the gaps between them
 are based on estimates that have provided by the submitter. This
 sequence will be replaced by the finished sequence as soon as it is
 available and the accession number will be preserved.
 * NOTE: This is a 'working draft' sequence.
 * This sequence will be replaced
 * by the finished sequence as soon as it is available and
 * the accession number will be preserved.

FEATURES Location/Qualifiers
 source 1. .102242
 /organism="Oryza sativa"
 /cultivar="Nipponbare"
 /db_xref="taxon:4530"
 /chromosome="2"
 /clone="OJ1124_D06"
 BASE COUNT 29287 a 22590 c 22673 g 27691 t 1 others
 ORIGIN

Query Match 9.9%; Score 40.8; DB 2; Length 102242;
 Best Local Similarity 49.5%; Pred. No. 1.8;
 Matches 105; Conservative 0; Mismatches 107; Indels 0; Gaps 0;

Qy 89 caccatcccaacactccaaaccaaccaacttcaaccaaaccaccacaacaatgcctt 148
 | | | | | | | | | | | | | | | | | | | | | |
 Db 55012 CTCTCCTCTCCGCCTACACGACAACCGCCTCTACGACCGCGCCATCCAAGCCTTCCGCA 54953
 Qy 149 cagtaaccaggcccggtctcatgtggcgtagcgctcgcccgcgcatggttagagccccacc 208
 | | | | | | | | | | | | | | | | | | | | | |
 Db 54952 CTCTCCCGCCGAGCTCGGCATCAAGCCAGCGTCGTCTCTCACAACGTCCTTCTCAAGT 54893
 Qy 209 ccttcgctcgcaatcccatcaccatgaccctcagcgctggcgcgccgacgtctcca 268
 | | | | | | | | | | | | | | | | | | | | | |
 Db 54892 CCTTTGTTGCCAGTGGCGACCTCGCCTCCGCCCGCGCCCTGTTTCGATGAAATGCCTTCCA 54833
 Qy 269 agaaagtcgtgaagacaagcactgtcttcttc 300
 | | | | | | | | | | | | | | | | | | | | | |
 Db 54832 AGGCTGACGTCGAGCCAGACATTGTCTCCTGC 54801

RESULT 7
 AP003865/c
 LOCUS AP003865 125118 bp DNA HTG 10-JUL-2001
 DEFINITION Oryza sativa chromosome 8 clone OJ1081_B12, *** SEQUENCING IN
 PROGRESS ***, in ordered pieces.

```

ACCESSION      AP003865
VERSION        AP003865.1  GI:14646798
KEYWORDS       HTG; HTGS_PHASE2.
SOURCE         Oryza sativa (cultivar:Nipponbare) DNA, clone:OJ1081_B12.
ORGANISM       Oryza sativa
                Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
                Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
                Ehrhartoideae; Oryzeae; Oryza.
REFERENCE      1 (bases 1 to 125118)
AUTHORS        Sasaki,T., Matsumoto,T. and Yamamoto,K.
TITLE          Oryza sativa nipponbare(GA3) genomic DNA, chromosome 8, BAC
                clone:OJ1081_B12
JOURNAL        Published Only in Database (2001) In press
REFERENCE      2 (bases 1 to 125118)
AUTHORS        Sasaki,T., Matsumoto,T. and Yamamoto,K.
TITLE          Direct Submission
JOURNAL        Submitted (09-JUL-2001) Takuji Sasaki, National Institute of
                Agrobiological Resources, Rice Genome Research Program; Kannondai
                2-1-2, Tsukuba, Ibaraki 305-8602, Japan
                (E-mail:tsasaki@abr.affrc.go.jp, URL:http://rgp.dna.affrc.go.jp/,
                Tel:81-298-38-7441, Fax:81-298-38-7468)
COMMENT        The nucleotide sequence of this BAC clone was generated by
                combining Monsanto and RGP-Japan sequencing data.
                NOTE: It currently consists of 1 contigs. Gaps between the contigs
                are represented as runs of N. The order of the pieces is believed
                to be correct as given, however the sizes of the gaps between them
                are based on estimates that have provided by the submitter. This
                sequence will be replaced by the finished sequence as soon as it is
                available and the accession number will be preserved.
                * NOTE: This is a 'working draft' sequence.
                * This sequence will be replaced
                * by the finished sequence as soon as it is available and
                * the accession number will be preserved.
FEATURES       Location/Qualifiers
                source                1. .125118
                                     /organism="Oryza sativa"
                                     /cultivar="Nipponbare"
                                     /db_xref="taxon:4530"
                                     /chromosome="8"
                                     /clone="OJ1081_B12"
BASE COUNT     34332 a  28142 c  28145 g  34297 t    202 others
ORIGIN

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Qy 82 accaatacacccatcccaacactccaaaccaaacacttcaaccaaacaccacaaca 141
 || | | | | | | | | | | | | | | | | | | | | | | | | | | | |
 Db 37855 ACANAAAGAACAAAACCAACACAACAAACCAACCACANCAACACCCACAAACACACCCCA 37796

Qy 142 atgccttcagtaaccagggcccggtctcatgtggcgtagcgctcgccgcgggcatggttagag 201
 || | | | | | | | | | | | | | | | | | | | | | | | | | | | |
 Db 37795 CAACCCCCCCCCCCCCCNCCCCNNCNNCCCCCCCCCCCCCNCCCCCCCCCCCCNNCNCCC 37736

Qy 202 ccccaacccttcgctcgcaatcccatcaccatgaccctcacgcctggcgcgccgcgcgac 261

Db 37735 CCCCNCCCCCCCCCNCCCCCNCCCCCCCCCCCCCNCCNCCCCCCCCCNCCNCCCCCCCC 37676

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RESULT      8
AF233344/c
LOCUS       AF233344      3338 bp      DNA                    .PRI      15-MAR-2000
DEFINITION  Homo sapiens fibroblast growth factor receptor 2 (FGFR2) gene,
             promoter sequence.
ACCESSION   AF233344
VERSION     AF233344.1  GI:7243697
KEYWORDS    .
SOURCE      human.
  ORGANISM  Homo sapiens
             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
             Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 3338)
  AUTHORS   Ricol,D., Cappellen,D., El Marjou,A., Gil-Diez-de-Medina,S.,
             Girault,J., Yoshida,T., Ferry,G., Tucker,G., Poupon,M., Chopin,D.,
             Thierry,J. and Radvanyi,F.
  TITLE     Tumour suppressive properties of fibroblast growth factor receptor
             2-IIIb in human bladder cancer
  JOURNAL   Oncogene 18 (51), 7234-7243 (1999)
  MEDLINE   20071102
REFERENCE   2  (bases 1 to 3338)
  AUTHORS   Girault,J., Radvanyi,F. and Ricol,D.
  TITLE     Direct Submission
  JOURNAL   Submitted (09-FEB-2000) UMR 144, CNRS-Institut Curie, 26 rue d'Ulm,
             Paris 75248, France
FEATURES             Location/Qualifiers
     source           1. .3338
                     /organism="Homo sapiens"
                     /db_xref="taxon:9606"
                     /chromosome="10"
                     /map="10q26"
                     /clone="PAC6539"
     promoter         1. .3338
                     /gene="FGFR2"
     gene             1. .>3338
                     /gene="FGFR2"
                     /note="fibroblast growth factor receptor 2"
BASE COUNT      832 a      733 c      854 g      919 t
ORIGIN

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Qy 127 caaaccaccacaacaatgccttcagtaacccagggccggtctcatgtggcgtagcgtcgcc 186
 | | | | | | | | | | | | | | | | | | | |
Db 3207 CCAGCCCGGAGAGCAGTCGCCGC GCCGGGCCAGGTACGCCGCATGCAGCCCCGCGGCGCC 3148

Qy 187 cgcgcatggttagagccccacccttcgctcgcaatcccatcaccatgaccctcacgcc 246
 || | || ||| | | | || ||| | | ||| ||| | |||
 Db 3147 CGAGCTTTGTGGCGGCCGCGCGCTCCCTCGCCGCTCCGCACCCGCCGCCGCCGCT 3088
 Qy 247 tggcgcgccgcccacctctcc 267
 ||| | || ||| |||||
 Db 3087 CGGCTCTCCACCGCGCTCTCC 3067

RESULT 9
 AC009988/c
 LOCUS AC009988 179004 bp DNA HTG 05-MAY-2001
 DEFINITION Homo sapiens chromosome 10 clone RP11-62L18, WORKING DRAFT
 SEQUENCE, 9 unordered pieces.
 ACCESSION AC009988
 VERSION AC009988.10 GI:13957605
 KEYWORDS HTG; HTGS_PHASE1; HTGS_DRAFT; HTGS_FULLTOP; HTGS_ACTIVEFIN.
 SOURCE human.
 ORGANISM Homo sapiens
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 REFERENCE 1 (bases 1 to 179004)
 AUTHORS Smith,D.R.
 TITLE Genome Therapeutics Corporation Sequencing Center: Human Genome
 Sequence Data
 JOURNAL Unpublished
 REFERENCE 2 (bases 1 to 179004)
 AUTHORS Smith,D.R.
 TITLE Direct Submission
 JOURNAL Submitted (09-SEP-1999) Genome Therapeutics Corporation, 100 Beaver
 Street, Waltham, MA 02453, USA
 COMMENT On May 5, 2001 this sequence version replaced gi:13605974.
 ----- Genome Center
 Center: Genome Therapeutics Corporation
 Center code: GTC
 Web site: <http://www.genomecorp.com/>
 Contact: gtc-seqcenter@genomecorp.com
 ----- Project Information
 Center project name: hg002
 ----- Summary Statistics
 Sequencing vector: N/A
 Chemistry: Dye-terminator Big Dye; 100% of reads
 Assembly program: Phrap; version 990315
 Consensus quality: 173303 bases at least Q40
 Consensus quality: 174498 bases at least Q30
 Consensus quality: 175282 bases at least Q20
 Insert size: 178303; sum-of-contigs
 Quality coverage: 3.9x in Q20 bases; sum-of-contigs

* NOTE: This is a 'working draft' sequence. It currently
 * consists of 9 contigs. The true order of the pieces
 * is not known and their order in this sequence record is
 * arbitrary. Gaps between the contigs are represented as
 * runs of N, but the exact sizes of the gaps are unknown.
 * This record will be updated with the finished sequence
 * as soon as it is available and the accession number will
 * be preserved.

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*      1      1196: contig of 1196 bp in length
*    1197      1296: gap of unknown length
*    1297      2376: contig of 1080 bp in length
*    2377      2476: gap of unknown length
*    2477      3501: contig of 1025 bp in length
*    3502      3601: gap of unknown length
*    3602      4746: contig of 1145 bp in length
*    4747      4846: gap of unknown length
*    4847      6274: contig of 1428 bp in length
*    6275      6374: gap of unknown length
*    6375     15038: contig of 8664 bp in length
*   15039     15138: gap of unknown length
*   15139     42629: contig of 27491 bp in length
*   42630     42729: gap of unknown length
*   42730     98264: contig of 55535 bp in length
*   98265     98364: gap of unknown length
*   98365    179004: contig of 80640 bp in length.

```

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FEATURES             Location/Qualifiers
     source            1. .179004
                        /organism="Homo sapiens"
                        /db_xref="taxon:9606"
                        /chromosome="10"
                        /clone="RP11-62L18"
                        /clone_lib="RPCI-11"
     misc_feature      1. .1196
                        /note="assembly_name:Contig1"
     misc_feature      1297. .2376
                        /note="assembly_name:Contig2"
     misc_feature      2477. .3501
                        /note="assembly_name:Contig3"
     misc_feature      3602. .4746
                        /note="assembly_name:Contig4"
     misc_feature      4847. .6274
                        /note="assembly_name:Contig7
                        clone_end:T7"
     misc_feature      6375. .15038
                        /note="assembly_name:Contig8
                        clone_end:SP6"
     misc_feature      15139. .42629
                        /note="assembly_name:Contig9"
     misc_feature      42730. .98264
                        /note="assembly_name:Contig10"
     misc_feature      98365. .179004
                        /note="assembly_name:Contig11"
BASE COUNT    47825 a  41271 c  40632 g  48463 t    813 others
ORIGIN

```

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Query Match          9.8%;  Score 40.2;  DB 2;  Length 179004;
Best Local Similarity 55.3%;  Pred. No. 2.6;
Matches 78;  Conservative 0;  Mismatches 63;  Indels 0;  Gaps 0;

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```

Qy    127 caaaccaccacaacaatgccttcagtaaccaggcccggtctcatgtggcgtagcgctgcc 186
      ||||  ||||  |  |  ||||  |||  ||||  ||  |||  |||
Db   46786 CCAGCCCGGAGAGCAGTCGCCGCGCCGGGCCAGGTACGCCGCATGCAGCCCCGCGGCGCC 46727

Qy    187 cgcggcatggtagagccccacccttcgctcgcaatcccatcaccatgaccctcagcc 246

```


Db 46726 CGAGCTTTGTGGCGGCCGCGCGCTCCCTCGCCCGCTCCGCACCCGCCGCCGCCGCT 46667
 Qy 247 tggcgcgccgcccacctctcc 267
 Db 46666 CGGCTCTCCACCGCGCTCTCC 46646

RESULT 10

AF275943

LOCUS AF275943 11096 bp DNA BCT 02-SEP-2000

DEFINITION Streptomyces avermitilis avermectin polyketide synthase gene, partial cds.

ACCESSION AF275943

VERSION AF275943.1 GI:9964075

KEYWORDS .

SOURCE Streptomyces avermitilis.

ORGANISM Streptomyces avermitilis

Bacteria; Firmicutes; Actinobacteria; Actinobacteridae; Actinomycetales; Streptomycineae; Streptomycetaceae; Streptomyces.

REFERENCE 1 (bases 1 to 11096)

AUTHORS Hong, Y.-S. and Lee, J.J.

TITLE Targeted Gene Disruption of the avermectin O-methyltransferase gene and polyketide synthase gene from Streptomyces avermitilis

JOURNAL Unpublished

REFERENCE 2 (bases 1 to 11096)

AUTHORS Hong, Y.-S. and Lee, J.J.

TITLE Direct Submission

JOURNAL Submitted (07-JUN-2000) Anticancer Agent Research Laboratory, Korea Research Institute of Bioscience and Biotechnology, P.O. Box 116, YuSong-Gu, Taejon 305-600, South Korea

FEATURES Location/Qualifiers

source

1. .11096

/organism="Streptomyces avermitilis"

/strain="ATCC31271"

/db_xref="taxon:33903"

/db_xref="ATCC:31271"

CDS

220. .>11096

/note="Avr1"

/codon_start=1

/transl_table=11

/product="avermectin polyketide synthase"

/protein_id="AAG09812.1"

/db_xref="GI:9964076"

/translation="MADEADGGVVFVFPQGQWPQWPGMGRELLDASDVFRSVRACEAE
 FAPYVDWSVEQVLRDSPDAPGLDRVDVVQRTLFAVMISLAALWRSQGVEPCAVLGHS
 GEIAAAHVSGGLSLADAARVGDAWSQAQTTLAGTGALVSVAATPELLPRIAPWTE
 PARLAVAAVNGPRSTVVSGAREAVADLVADLTAAQVRTRMIPVDVPAHSPLMYAIE
 EER VVSGLLPITPRPSRIPFHSSVTGGRLDTRDLAAYWYRNMSSTVRFEPARLLLQ
 QGP KTFVEMSPHPVLTMLGLQELADLGDTTGADTVIMGTLRRGQGTLDHFLTSLA
 QLRGH GETSATTVLSARLTALSPTQQSLLLLDLVRAHTMAVLNDDGNERTASDAGPS
 ASFAHL GFDSVMGVELRNRLSKATGLRLPVTLLDHTTPAAVAARLRTAALGHLDE
 DTA PVPDS PSGHGGTAAADDPIAIIIGMACRFPGGVRSPKDLWELAAASGGDAIG
 PFPPTDRGWPTQR HAQDPTQPGTFYPQGGGFLHDAAHFDAGFFGISPREALAMPQ
 QRLLLLET SWEAFERA GIDPLSVRGSRTGVFAGALSFDYGPRMDTASSEGAADVEGH
 ILTGTTGSVLSGRSAYS FGLEGPAITVDTGCSASLVTLHLACQSLRSGETFALAGGV
 SDVHPGMFIEFSRQCGL SVDGRCKAVSAAADGTGWGEGIGLLAVVRGSAVNQDGASNGLT
 APNGPAQERVIRQAL

ANAGLSVADVDDVEGHGTGTTLGDPIDAEQALLATYQQRAGDRPLWLGLSKSNIGHTMA
AAGVGGVIKMMALREGVLPRTLHVDEPSQGLAAGAVRLLTEAVPWPGDAAGRLRRA
GVSSFGIGGTNAHVILEEAPAAGGCVAGGRVLEGAPGLAISVAESVAAPVAVSAPVAE
SVPVPVPVPVPVPVSARSEAGLRAQAEALRQYEAVQPDVSLADVGAGLACRQAVLEHH
VVILAACTSSSRSAARTTARSSSTARPQARPAPTSARRIGALAAGSGSAALTGHAPG
GDRGGVVVFVPWQGGQWAGMGVRLCLLRVFAARMQACEEALAPWVDWSVVDILRRDA
GDAVWEQADVVQPVLFVSVMSLAALWRSYGIENEVLGHSKDEIAAAHIYGALSCLKDA
AKTVALPPQEVEQLIGERGGRLWVAAVNGPRSTAVSGDAEAVVEVLAYCAGTGVRPRI
PVDYASHCPHVQPLREELLELLGDISPQPYGVFFSTVEGTWLDTTTTLDAAYWYRNLH
QPVRFSHDVQALADQGHRVLEVSHPHTLVPAIEDTTEDTARRRHCDRQPPRRRERHP
LLPQRLRLDPYYRHRQTHHVAPLLDPPRHLPPPLDAPRPAHLPFQHQHYWLESSQPGA
GSGSGAGAGSGAGSGRAGTAGGTAEVESRFWDAAVARQDLETVATTAVPPSAGLDTV
PALSAWHRHQHDQARINTWTYQETWKPLTLPTTHQPHQTWLIAPETQTHHPHITNIL
TNLHHHGITPIPLPLTTHHTNPQHLHHTLHHTRQQAQNHTTGAITGLLSLLALDETPH
PHHPHTPTGTLLNLTLTQHTQTHPPTPLWYATTNATTTTHPNDPLTHGTQAQTWGLAR
TTLLEHPTHTAGIIDLPTTPTPHTLHHLTQTLTQPHHQTQLAIRTTGTHTRRLTPTTL
TPTHQPPTPTPHGTTTLITGGTGALATHLTHHLTTHQPTQHLLLTSTRTGPHTPHAQHLT
TQLQQKGIHLTITTCDTSTPRPTHNNSLNTIPPQHPVTTVIHTGGILDDATLTNLTP
QLNNVLRKAHSAHLLHQLTQHTPLTAFVLYSSAAATFGAPGQANYAAANAYLDALAH
HRHTHHLPATSIAGWTWQGNGLADSDKARAYLDRRGFRMSPPELATAAVTQAIADTER
PYVVIADIDWSKIEHTSQTSDLVSAAREREPAPVQRPTPPAELHKTLAHQTSADQRAAL
LELVDRDHVAAVLRHADPKAIAPDQSFALGFDSLTAVEFRNLLIKATGLRLPVSLVFD
HPTPAKLAVHLQNLRGTAESAASAAVTAESVTEPIAIVGMACRFPGGVTSSADDF
WDLISSEQDAIGGFPTDRGWDLTLYDPDPDHPGTCYTRNGGFLYDAGHFDAEFFGIS
PREALAMDPQQRLLLETAWETIEHAGINPHTLHGTPTGVFTGTNGQDYALRVHNAGQS
TDGFALTGTAGSVISGRISYTFGFEGPAVSVDTACSSSLVALHLACQALRAGECSMAL
AGGVTVMSSPGAFVEFSRQRGLAADGHCKAFSAADGTGWGEGVGMILLVERLSDAHRN
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PADDVPGGPPAGEGDAGSDDEAAAGSPGVWPWLVSASQPALRAQAQALHAHLTDHPG
LDLADVGYTTLAARAVFDHRATLIAADRDTFLQALQALAAGEPHPAVHSSAPGGTGT
GEAAGKTAFICSGQGTQRPMAHGLYHTHPVFAALNDICTHLDPHLPLLTQNL
DNDNEDAAALLQQTRYAQPALFAFQVALHRLTLDGYHITPHYAGHSLGEITGAHLAG
ILTLTDATTLITQRATLMQTMPPGTMTTLHTTPHHITHHLTAHENDLAIAAINTPTSL
VISGTPHTVQHITTLQQQGKIKTTLPTNHAHFSPHTNPILNQLHQHTQTLTYHPHT
PLITANTPPDQLLTPHYWTQARNTVDYATTTQTLHQHGVTTYIELGPDNTLTTLTHH
NLPNTPTTTLTLTHPHHPQTHLLTNLAKTTTTWHPHHYTHHAQTPHPHPLDLPTYP
FQHHHYWLESTQPGAGNVSAAGLDPTHEPLLGLATLELATDGGALLAGRLSLRSHPWLA
DHAVGGTVLLSGATFLELALHAGTYVGC DRVDELTLHAPLVVPVDDGGVSVQGVAAAD
GKGRRLVSVYARGGSACGGGGASGGVWTCHASGVLVEAAAGGVVDGLAGVWPPRGAV
AVDVGVRDRLAGAGCVLGPVFSGLRAVWRDGGDLAEVCLPEEAWGDAAGFGLHPAL
LNGVVQPLSVLLPGGTGFGKAGFGKGVVPAVWGGVSLHRAGVTGVRVRVSAVGRGG
GREAVSVVVGDEAGVPVASVDRLELRPVDMDQLRAVSVSAGRRGSLYAVQWAEVGPVP
VCGQAWAWHEDVGESGGGPVGVVVLRCPDAGAGGGGGGGGGGGVGEVGGVGLGVVQG
WLGLERFAGSRLVVVTRGAVVAGPEDGPVDVVGASVWGLVRSQAQAEHPDRFVLLDLDT
DTGTDLDTGAGAGWVDGGRVAAVACGEPQLAVRGERLLAARLTRLESSGDVPAQRS
GDTRARRSDVPAQRSGGVPAARRSVDSVSGREVLPLWLSGGSVLVTGGTGVLGAAVARHLA
GVCGRDLLLLVSRGPDAPGAEGLRRSWPRGAEVRIACDVGERREVRLAGGCSCRV
SVFVDFSAVASVTVRLPVASDVRKEAAMAYATVEEFTDYLDPPD"

BASE COUNT 1756 a 4059 c 3528 g 1753 t
ORIGIN

Query Match 9.7%; Score 39.8; DB 1; Length 11096;
Best Local Similarity 46.8%; Pred. No. 3.6;
Matches 125; Conservative 0; Mismatches 142; Indels 0; Gaps 0;

Qy 77 gcgataccaatacacccatcccaacactccaaaccaaccaacacttcaaccaaaccacca 136
 |||| |||| |||| |||| |||| |||| |||| |||| |||| |||| |||| ||||
 Db 5441 GCGACACCAGCACACCCAGACCAACTCACAACAACTCACTCAACACCATCCCCCACAAC 5500

Qy 137 caacaatgccttcagtaacccaggcccggtctcatgtggcgtagcgctcgcccgcgccatgg 196
 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
 Db 5501 ACCCCGTCACCACCGTCATCCACACCGGAGGCATCCTCGACGACGCCACCCTCACCAACC 5560

Qy 197 tagagccccaccccttcgctcgcaatcccatcaccatgacccctcaagcctggcgcgccg 256
 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
 Db 5561 TCACCCCCACCCAACCTCAACAACGTCCTCCGCGCCAAAGCCCACAGCGCCACCTCCTCC 5620

Qy 257 ccgacctctccaagaaagtcgtgaagacaagcactgtcttcttcccttctatgcaggta 316
 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
 Db 5621 ACCAACTCACCCAACACACCCCCCTCACCGCCTTCGTCCTCTACTCCTCCGCCGCCGCCA 5680

Qy 317 tccttgatggccagtcgcagccgcct 343
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 Db 5681 CCTTCGGCGCACCCGGCCAAGCCAAC 5707

RESULT 11

AC083782/c

LOCUS AC083782 56494 bp DNA HTG 30-SEP-2000

DEFINITION Homo sapiens chromosome 12 clone RP11-84L9 map 12, LOW-PASS
 SEQUENCE SAMPLING.

ACCESSION AC083782

VERSION AC083782.1 GI:10440689

KEYWORDS HTG; HTGS_PHASE0.

SOURCE human.

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 56494)

AUTHORS Birren,B., Linton,L., Nusbaum,C. and Lander,E.

TITLE Homo sapiens chromosome 12, clone RP11-84L9

JOURNAL Unpublished

REFERENCE 2 (bases 1 to 56494)

AUTHORS Birren,B., Linton,L., Nusbaum,C., Lander,E., Abraham,H., Allen,N.,
 Anderson,S., Barna,N., Bastien,V., Beda,F., Boguslavkiy,L.,
 Boukhgalter,B., Brown,A., Burkett,G., Campopiano,A., Castle,A.,
 Choepel,Y., Colangelo,M., Collins,S., Collymore,A., Cooke,P.,
 DeArellano,K., Dewar,K., Diaz,J.S., Dodge,S., Ferreira,P.,
 FitzHugh,W., Gage,D., Galagan,J., Gardyna,S., Ginde,S., Goyette,M.,
 Graham,L., Grand-Pierre,N., Hagos,B., Heaford,A., Horton,L.,
 Iliev,I., Johnson,R., Jones,C., Kann,L., Karatas,A., LaRocque,K.,
 Lamazares,R., Landers,T., Lehoczký,J., Levine,R., Lieu,C., Liu,G.,
 Macdonald,P., Marquis,N., McCarthy,M., McEwan,P., McKernan,K.,
 McPheeters,R., Meldrim,J., Meneus,L., Mihova,T., Mlenga,V.,
 Morrow,J., Murphy,T., Naylor,J., Norman,C.H., O'Connor,T.,
 O'Donnell,P., O'Neil,D., Olivar,T.M., Oliver,J., Peterson,K.,
 Pierre,N., Pisani,C., Pollara,V., Raymond,C., Rieback,M., Riley,R.,
 Rogov,P., Rothman,D., Roy,A., Santos,R., Schauer,S., Severy,P.,
 Sougnez,C., Spencer,B., Stange-Thomann,N., Stojanovic,N.,
 Strauss,N., Subramanian,A., Talamas,J., Tesfaye,S., Theodore,J.,
 Tirrell,A., Travers,M., Trigilio,J., Vassiliev,H., Viel,R., Vo,A.,

Wilson,B., Wu,X., Wyman,D., Ye,W.J., Young,G., Zainoun,J.,
Zimmer,A. and Zody,M.

TITLE Direct Submission

JOURNAL Submitted (30-SEP-2000) Whitehead Institute/MIT Center for Genome
Research, 320 Charles Street, Cambridge, MA 02141, USA

COMMENT All repeats were identified using RepeatMasker:

Smit, A.F.A. & Green, P. (1996-1997)

<http://ftp.genome.washington.edu/RM/RepeatMasker.html>

----- Genome Center

Center: Whitehead Institute/ MIT Center for Genome Research

Center code: WIBR

Web site: <http://www-seq.wi.mit.edu>

Contact: sequence_submissions@genome.wi.mit.edu

----- Project Information

Center project name: L11227

Center clone name: 84_L_9

* NOTE: This record contains 72 individual
* sequencing reads that have not been assembled into
* contigs. Runs of N are used to separate the reads
* and the order in which they appear is completely
* arbitrary. Low-pass sequence sampling is useful for
* identifying clones that may be gene-rich and allows
* overlap relationships among clones to be deduced.
* However, it should not be assumed that this clone
* will be sequenced to completion. In the event that
* the record is updated, the accession number will
* be preserved.

* 1 634: contig of 634 bp in length
* 635 734: gap of 100 bp
* 735 1430: contig of 696 bp in length
* 1431 1530: gap of 100 bp
* 1531 2223: contig of 693 bp in length
* 2224 2323: gap of 100 bp
* 2324 3001: contig of 678 bp in length
* 3002 3101: gap of 100 bp
* 3102 3794: contig of 693 bp in length
* 3795 3894: gap of 100 bp
* 3895 4593: contig of 699 bp in length
* 4594 4693: gap of 100 bp
* 4694 5386: contig of 693 bp in length
* 5387 5486: gap of 100 bp
* 5487 6141: contig of 655 bp in length
* 6142 6241: gap of 100 bp
* 6242 6945: contig of 704 bp in length
* 6946 7045: gap of 100 bp
* 7046 7653: contig of 608 bp in length
* 7654 7753: gap of 100 bp
* 7754 8449: contig of 696 bp in length
* 8450 8549: gap of 100 bp
* 8550 9247: contig of 698 bp in length
* 9248 9347: gap of 100 bp
* 9348 10038: contig of 691 bp in length
* 10039 10138: gap of 100 bp
* 10139 10836: contig of 698 bp in length
* 10837 10936: gap of 100 bp
* 10937 11647: contig of 711 bp in length

* 11648 11747: gap of 100 bp
 * 11748 12433: contig of 686 bp in length
 * 12434 12533: gap of 100 bp
 * 12534 13240: contig of 707 bp in length
 * 13241 13340: gap of 100 bp
 * 13341 14065: contig of 725 bp in length
 * 14066 14165: gap of 100 bp
 * 14166 14877: contig of 712 bp in length
 * 14878 14977: gap of 100 bp
 * 14978 15673: contig of 696 bp in length
 * 15674 15773: gap of 100 bp
 * 15774 16374: contig of 601 bp in length
 * 16375 16474: gap of 100 bp
 * 16475 17104: contig of 630 bp in length
 * 17105 17204: gap of 100 bp
 * 17205 17906: contig of 702 bp in length
 * 17907 18006: gap of 100 bp
 * 18007 18692: contig of 686 bp in length
 * 18693 18792: gap of 100 bp
 * 18793 19481: contig of 689 bp in length
 * 19482 19581: gap of 100 bp
 * 19582 20296: contig of 715 bp in length
 * 20297 20396: gap of 100 bp
 * 20397 21077: contig of 681 bp in length
 * 21078 21177: gap of 100 bp
 * 21178 21915: contig of 738 bp in length
 * 21916 22015: gap of 100 bp
 * 22016 22700: contig of 685 bp in length
 * 22701 22800: gap of 100 bp
 * 22801 23507: contig of 707 bp in length
 * 23508 23607: gap of 100 bp
 * 23608 24314: contig of 707 bp in length
 * 24315 24414: gap of 100 bp
 * 24415 25032: contig of 618 bp in length
 * 25033 25132: gap of 100 bp
 * 25133 25833: contig of 701 bp in length
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 * 32032 32719: contig of 688 bp in length
 * 32720 32819: gap of 100 bp
 * 32820 33512: contig of 693 bp in length
 * 33513 33612: gap of 100 bp

* 33613 34332: contig of 720 bp in length
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 * 35224 35968: contig of 745 bp in length
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 * 36069 36747: contig of 679 bp in length
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 * 36848 37521: contig of 674 bp in length
 * 37522 37621: gap of 100 bp
 * 37622 38331: contig of 710 bp in length
 * 38332 38431: gap of 100 bp
 * 38432 39140: contig of 709 bp in length
 * 39141 39240: gap of 100 bp
 * 39241 39926: contig of 686 bp in length
 * 39927 40026: gap of 100 bp
 * 40027 40718: contig of 692 bp in length
 * 40719 40818: gap of 100 bp
 * 40819 41503: contig of 685 bp in length
 * 41504 41603: gap of 100 bp
 * 41604 42310: contig of 707 bp in length
 * 42311 42410: gap of 100 bp
 * 42411 43121: contig of 711 bp in length
 * 43122 43221: gap of 100 bp
 * 43222 43938: contig of 717 bp in length
 * 43939 44038: gap of 100 bp
 * 44039 44715: contig of 677 bp in length
 * 44716 44815: gap of 100 bp
 * 44816 45525: contig of 710 bp in length
 * 45526 45625: gap of 100 bp
 * 45626 46244: contig of 619 bp in length
 * 46245 46344: gap of 100 bp
 * 46345 47044: contig of 700 bp in length
 * 47045 47144: gap of 100 bp
 * 47145 47842: contig of 698 bp in length
 * 47843 47942: gap of 100 bp
 * 47943 48554: contig of 612 bp in length
 * 48555 48654: gap of 100 bp
 * 48655 49340: contig of 686 bp in length
 * 49341 49440: gap of 100 bp
 * 49441 50147: contig of 707 bp in length
 * 50148 50247: gap of 100 bp
 * 50248 50970: contig of 723 bp in length
 * 50971 51070: gap of 100 bp
 * 51071 51781: contig of 711 bp in length
 * 51782 51881: gap of 100 bp
 * 51882 52572: contig of 691 bp in length
 * 52573 52672: gap of 100 bp
 * 52673 53370: contig of 698 bp in length
 * 53371 53470: gap of 100 bp
 * 53471 54081: contig of 611 bp in length
 * 54082 54181: gap of 100 bp
 * 54182 54883: contig of 702 bp in length

Query Match 9.7%; Score 39.8; DB 2; Length 56494;
 Best Local Similarity 58.6%; Pred. No. 3.4;
 Matches 68; Conservative 0; Mismatches 48; Indels 0; Gaps 0;

Qy 61 atttgagttcatcctagcgataccaatacacccatcccaaacactccaaaccaaccaacac 120
 |||| |||| | | || ||| || |||| ||| | | | ||| ||| |
 Db 31161 ATTTCCAACCATCCCACCCATTCATCCCATCCATTCATTCATTCATTCATTCATCCA 31102

Qy 121 ttcaaccaaaccaccacaacaatgccttcagtaacccaggcccggtctcatgtggcg 176
 | || ||| ||| || | |||| | || | ||| | | |||| |||
 Db 31101 TGCATCCATTCCATTCCATCCATGCATGCATCCATCCATACATNTATCATTGAGCG 31046

RESULT 12

SC6G10/c

LOCUS SC6G10 36734 bp DNA BCT 24-MAR-1999

DEFINITION Streptomyces coelicolor cosmid 6G10.

ACCESSION AL049497

VERSION AL049497.1 GI:4539196

KEYWORDS aminotransferase; cox1; cox2; cox3; cytochrome b; cytochrome c oxidase; gene duplication; glycosyl transferase; heme-binding; integral membrane protein; long chain fatty acid coA ligase; membrane transporter; phosphoribosylanthranilate transferase; qcrA; qcrB; qcrC; quinolinate synthetase; Rieske iron-sulfur protein; secreted protein; transcriptional regulator; trpD; two component sensor kinase/response regulator.

SOURCE Streptomyces coelicolor A3(2).

ORGANISM Streptomyces coelicolor A3(2)
 Bacteria; Firmicutes; Actinobacteria; Actinobacteridae;
 Actinomycetales; Streptomycineae; Streptomycetaceae; Streptomyces.

REFERENCE 1 (bases 1 to 36734)

AUTHORS Redenbach,M., Kieser,H.M., Denapaite,D., Eichner,A., Cullum,J., Kinashi,H. and Hopwood,D.A.

TITLE A set of ordered cosmids and a detailed genetic and physical map for the 8 Mb Streptomyces coelicolor A3(2) chromosome

JOURNAL Mol. Microbiol. 21 (1), 77-96 (1996)

MEDLINE 97000351

REFERENCE 2 (bases 1 to 36734)

AUTHORS Seeger,K. and Harris,D.

JOURNAL Unpublished

REFERENCE 3 (bases 1 to 36734)

AUTHORS Bentley,S.D., Parkhill,J., Barrell,B.G. and Rajandream,M.A.

TITLE Direct Submission

JOURNAL Submitted (23-MAR-1999) Streptomyces coelicolor sequencing project, Sanger Centre, Wellcome Trust Genome Campus, Hinxton, Cambridge CB10 1SA E-mail: barrell@sanger.ac.uk Cosmids supplied by Prof. David A. Hopwood, [3] John Innes Centre, Norwich Research Park, Colney, Norwich, Norfolk NR4 7UH, UK

COMMENT

Notes:
 Streptomyces coelicolor sequencing at The Sanger Centre is funded by the BBSRC and Beowulf Genomics
 Details of S. coelicolor sequencing at the Sanger Centre are available on the World Wide Web.
 (URL; http://www.sanger.ac.uk/Projects/S_coelicolor/) CDS are numbered using the following system eg SC7B7.01c. SC (S. coelicolor), 7B7 (cosmid name), .01 (first CDS), c (complementary strand).
 The more significant matches with motifs in the PROSITE database are also included but some of these may be fortuitous. The length in codons is given for each CDS.

Usually the highest scoring match found by fasta -o is given for CDS which show significant similarity to other CDS in the database. The position of possible ribosome binding site sequences are given where these have been used to deduce the initiation codon. Gene prediction is based on positional base preference in codons using a specially developed Hidden Markov Model (Krogh et al., Nucleic Acids Research, 22(22):4768-4778(1994)) and the FramePlot program of Bibb et al., Gene 30:157-66(1984) as implemented at <http://www.nih.go.jp/jun/cgi-bin/frameplot.pl>. CAUTION: We may not have predicted the correct initiation codon. Where possible we choose an initiation codon (atg, gtg, ttg or (att)) which is preceded by an upstream ribosome binding site sequence (optimally 5-13bp before the initiation codon). If this cannot be identified we choose the most upstream initiation codon.

IMPORTANT: This sequence MAY NOT be the entire insert of the sequenced clone. It may be shorter because we only sequence overlapping sections once, or longer, because we arrange for a small overlap between neighbouring submissions. Cosmid 6G10 Lies between and overlaps with cosmids 6E10 and 5F7 on the AseI-C genomic restriction fragment. .

FEATURES	Location/Qualifiers
source	1..36734 /organism="Streptomyces coelicolor A3(2)" /strain="A3(2)" /db_xref="taxon:100226" /clone="cosmid 6G10"
gene	complement(1..120) /gene="SC6G10.01c"
CDS	complement(<1..120) /gene="SC6G10.01c" /note="SC6G10.01c, partial CDS, unknown, len: >40aa" /codon_start=1 /transl_table=11 /label=SC6G10.01c /product="hypothetical protein" /protein_id="CAB39855.1" /db_xref="GI:4539197" /translation="MARAGRSGTPHRRANPPPHRHPTADAPVPFTPMRTLLI"
misc_feature	1..103 /note="Nominal overlap with cosmid 6E10."
gene	complement(232..666) /gene="SC6G10.02c"
CDS	complement(232..666) /gene="SC6G10.02c" /note="SC6G10.02c, unknown, len: 144aa; similar to hypothetical proteins from Mycobacterium eg. TR:O53519 (EMBL:AL021957) hypothetical protein from Mycobacterium tuberculosis (144 aa) fasta scores; opt: 479, z-score: 620.2, E(): 3.1e-27, (49.0% identity in 143 aa overlap)." /codon_start=1 /transl_table=11 /label=SC6G10.02c /product="hypothetical protein" /protein_id="CAB39856.1" /db_xref="GI:4539198" /translation="MAEHTSSSITIEAAPADVMAVIADFARYPDWTGEVKEAQVLATD"

EQGRAEQVRLVMDAGAIKDDQTLGYTWTGEHEVSWTLVKSQMLRSLDGSYLLRPAGTG
 TEVTYRLTVDVKIPMLGMIKRKAEKVIIDRALAGLKKRVESK"

gene complement(804. .1601)
 /gene="SC6G10.03c"

CDS complement(804. .1601)
 /gene="SC6G10.03c"
 /note="SC6G10.03c, unknown, len: 265aa; weak similarity to
 many eg. TR:P95860 (EMBL:Y08256) hypothetical protein (309
 aa) fasta scores; opt: 152, z-score: 186.9, E(): 0.0041,
 (24.8% identity in 270 aa overlap)."
 /codon_start=1
 /transl_table=11
 /label=SC6G10.03c
 /product="hypothetical protein"
 /protein_id="CAB39857.1"
 /db_xref="GI:4539199"
 /translation="MAPTPPRNTSTRVHVVS DVHGNARDLARAGDGADALICLDLVL
 FLDYADHSRGIFPDLFGVANADRIVALRTARRFEEAREFGRRWLAEAGGEPRELIERA
 VRKQYAELEFAAFPTPTYATYGNVDVPPLPWEYAGPGTTVL DGERVEIGGRVFGFVGGG
 LRTPMNTPEYISDEEYAAKIEAVGEVDVLC THIPPEVPELVYD TVARRFERGSRALLD
 AIRRTRPRYALFGHVHQPLVRRMRVGATECVNVGHFASSGRPWALEW"

gene 1912. .3708
 /gene="SC6G10.04"

CDS 1912. .3708
 /gene="SC6G10.04"
 /note="SC6G10.04, probable long chain fatty acid coA
 ligase, len: 598aa; similar to many eg. TR:E1359128
 (EMBL:AL034443) putative long chain fatty acid coA ligase
 from Streptomyces coelicolor (608 aa) fasta scores; opt:
 1347, z-score: 1506.7, E(): 0, (51.3% identity in 608 aa
 overlap) and SW:LCFB_RAT long chain fatty acid coA ligase
 from Rattus norvegicus (Rat) (699 aa) fasta scores; opt:
 568, z-score: 634.7, E(): 4.7e-28, (30.2% identity in 589
 aa overlap). Contains Pfam match to entry PF00501
 AMP-binding, AMP-binding enzyme and Prosite match to
 PS00455 Putative AMP-binding domain signature."
 /codon_start=1
 /transl_table=11
 /label=SC6G10.04
 /product="putative long chain fatty acid coA ligase"
 /protein_id="CAB39858.1"
 /db_xref="GI:4539200"
 /translation="MREFSLPALYEV PADGNLT DIVRRNAAQHPDVAVIARKVGGVWQ
 DVTARAFLAEVHSAAKGLIASGVQPGDRVGLMSRTRYEWTL LDFAIWSAGAITVPVYE
 TSSPEQVQWILGDSGATACVVESAGHAAAVESVREQLPALKNVWQIDAGAVEELGRLG
 QDVTDR TVEERGSIAKADDPATIVYTS GTTGRPKGCVLTHRSFFAE CGNVVERLRPLF
 RTGECSVLLFLPLAHVFGRLVQVAPMIAPIKLG NVPDIKNLTDELA AFRPTLILGVPR
 VF EKVYNSARAKAQADGKGKIFDKAADTAIAYS KALDAPSGSPVGLKIKHKVFDKLVY
 SKLR TVLGGRGEY AISGGAPLGERLGHFFRGIGFTVLEGYGLTESCAATAFNPWDRQK
 IGT VQG PLPGSVVRIADDGEVLLHGEHLFKEYWNNPGATAEALADGW FHTGDIGTLDE
 DGYLRITGRKKEIIVTAGGKNVAPV MEDRIRAHALVAECMVVGDGRPFV GALVTIDE
 EFLGRWCAEHGKPAGSTAVSLREDPELLAAIQDAVDDGNA AVSKAESVRKFRVLGAQF
 TEDSGHLTPSLKLKRNVVAKDYADEIEAIYSK"

misc_feature 2050. .3387
 /gene="SC6G10.04"
 /note="Pfam match to entry PF00501 AMP-binding,
 AMP-binding enzyme, score -28.50, E-value 3.2e-13."

misc_feature 2458. .2493
 /gene="SC6G10.04"
 /note="PS00455 Putative AMP-binding domain signature."
 gene complement(3696. .4934)
 /gene="SC6G10.05c"
 CDS complement(3696. .4934)
 /gene="SC6G10.05c"
 /note="SC6G10.05c, possible glycosyl transferase, len: 412aa; similar to TR:053522 (EMBL:AL021957) hypothetical protein from Mycobacterium tuberculosis (399 aa) fasta scores; opt: 1276, z-score: 1452.2, E(): 0, (51.9% identity in 391 aa overlap) and SW:WCAL_SALTY putative colanic acid biosynthesis glycosyl transferase from the rfb (O antigen) gene cluster of Salmonella typhimurium (406 aa) fasta scores; opt: 291, z-score: 334.2, E(): 2.6e-11, (29.0% identity in 300 aa overlap). Contains Pfam match to entry PF00534 Glycos_transf_1, Glycosyl transferases group 1."
 /codon_start=1
 /transl_table=11
 /label=SC6G10.05c
 /product="putative glycosyl transferase"
 /protein_id="CAB39859.1"
 /db_xref="GI:4539201"
 /translation="MRKTLIVTNDFFPRPGGIQAFLHNMALRLDPERLVVYASTWKRG REGIEATAAFDAEQPFTVVRDRTTMLLPATPGATRRVGLLREHGCTSVWFGAAAPLGL MAPALRRAGAERLVATTHGHEAGWAQLPAARQLLRIGESTDTITYLGEYTRSRIAGALTPGAAARMVQLPPGVDEKTFHPASGGDEVRRARLGFTDRPVVVCVSRLVPRKGQDTLI RAMPRILAAEPDAVLLIVGGGPYEKDLRLRLAEETGVAAAVHFTGAVPWSELPAHYGAG DVFAMPCRTTRGGGLDVEGLGIVYLEASATGLPVVAGDSGGAPDAVL DGETGWVVRGED PNESADRITLLADPELRRRMGERGRAWVEEKWRWDL LAEHLRTL LQGGSAAARARQAT DNVGPPTNRTRHPGRRPYLE"
 misc_feature complement(3849. .4322)
 /gene="SC6G10.05c"
 /note="Pfam match to entry PF00534 Glycos_transf_1, Glycosyl transferases group 1, score 86.70, E-value 1.1e-23."
 gene 5091. .6356
 /gene="SC6G10.06"
 CDS 5091. .6356
 /gene="SC6G10.06"

Query Match 9.6%; Score 39.6; DB 1; Length 36734;
 Best Local Similarity 48.6%; Pred. No. 3.9;
 Matches 108; Conservative 0; Mismatches 114; Indels 0; Gaps 0;

Qy 162 ccgtctcatgtggcgtagcgtcgccccgcggcatggtagagccccacccttcgctcgcaa 221
 || |||| | | ||| || ||| || | |||| |||| | | | |||
 Db 21826 CCCGTTTCATCGAGTCCTGGGTCACCGGCGACAAGCGCGAGCACCATCCTGGACCGCCC 21767
 Qy 222 tcccatcaccatgaccctcagcgctggcgcgccgacgtctccaagaaagtgcgtgaa 281
 | || | || |||| | |||| | | |||| || || | |||||
 Db 21766 GCGCAACGCCCCGACCGTACGGCCTTCGGTGTGCCTGGCTGACCGTCTACTTCGTGCT 21707
 Qy 282 gacaagcactgtcttcttcccttctatgcaggtatccttggatggccagtcgcagccgc 341
 | | | || | | | | | | | | | | | | | | | |
 Db 21706 GCTGATCGGTGGCGGCAACGACCTGTGGGCCACCACTTCCACCTGTGATCAACGCGAT 21647

Qy 342 ctggtggttcaacggaacatgtgactcttccaaatggaagt 383
 | | | | | | | | | | | | | | | | | | | |
 Db 21646 CACCTGGTTCGTCCGCATCGCGTTCTTCGTCGGACCGGTCGT 21605

RESULT 13

AC023212/c

LOCUS AC023212 78220 bp DNA HTG 13-JUL-2000

DEFINITION Homo sapiens clone RP11-758K16, LOW-PASS SEQUENCE SAMPLING.

ACCESSION AC023212

VERSION AC023212.2 GI:9164272

KEYWORDS HTG; HTGS_PHASE0.

SOURCE human.

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 78220)

AUTHORS Birren,B., Linton,L., Nusbaum,C. and Lander,E.

TITLE Homo sapiens, clone RP11-758K16

JOURNAL Unpublished

REFERENCE 2 (bases 1 to 78220)

AUTHORS Birren,B., Linton,L., Nusbaum,C., Lander,E., Abraham,H., Allen,N.,
 Anderson,S., Baldwin,J., Barna,N., Beckerly,R., Beda,F.,
 Boguslavkiy,L., Boukhgalter,B., Brown,A., Burkett,G., Castle,A.,
 Choepel,Y., Colangelo,M., Collins,S., Collymore,A., Cooke,P.,
 DeArellano,K., Dewar,K., Domino,M., Doyle,M., Fenestor,J.,
 Ferreira,P., FitzHugh,W., Forrest,C., Gage,D., Galagan,J.,
 Gardyna,S., Grant,G., Hagos,B., Heaford,A., Horton,L.,
 Howland,J.C., Johnson,R., Jones,C., Kann,L., Karatas,A., Klein,J.,
 Landers,T., Lehoczký,J., Levine,R., Lieu,C., Liu,G., Locke,K.,
 Macdonald,P., Marquis,N., McEwan,P., McGurk,A., McKernan,K.,
 McPheeters,R., Meldrim,J., Meneus,L., Morrow,J., Naylor,J.,
 Norman,C.H., O'Connor,T., O'Donnell,P., Olivar,T.M., Peterson,K.,
 Pierre,N., Pisani,C., Pollara,V., Raymond,C., Riley,R., Rothman,D.,
 Roy,A., Santos,R., Severy,P., Spencer,B., Stange-Thomann,N.,
 Stojanovic,N., Subramanian,A., Talamas,J., Tesfaye,S., Theodore,J.,
 Tirrell,A., Vassiliev,H., Viel,R., Vo,A., Wu,X., Wyman,D., Ye,W.J.,
 Zimmer,A. and Zody,M.

TITLE Direct Submission

JOURNAL Submitted (09-FEB-2000) Whitehead Institute/MIT Center for Genome
 Research, 320 Charles Street, Cambridge, MA 02141, USA

COMMENT On Jul 13, 2000 this sequence version replaced gi:6957758.

All repeats were identified using RepeatMasker:

Smit, A.F.A. & Green, P. (1996-1997)

<http://ftp.genome.washington.edu/RM/RepeatMasker.html>

----- Genome Center

Center: Whitehead Institute/ MIT Center for Genome Research

Center code: WIBR

Web site: <http://www-seq.wi.mit.edu>

Contact: sequence_submissions@genome.wi.mit.edu

----- Project Information

Center project name: L6564

Center clone name: 758_K_16

* NOTE: This record contains 89 individual

* sequencing reads that have not been assembled into

* contigs. Runs of N are used to separate the reads
 * and the order in which they appear is completely
 * arbitrary. Low-pass sequence sampling is useful for
 * identifying clones that may be gene-rich and allows
 * overlap relationships among clones to be deduced.
 * However, it should not be assumed that this clone
 * will be sequenced to completion. In the event that
 * the record is updated, the accession number will
 * be preserved.

```
*      1      765: contig of 765 bp in length
*      766 865: gap of      100 bp
*      866     1651: contig of 786 bp in length
*     1652 1751: gap of      100 bp
*     1752     2513: contig of 762 bp in length
*     2514 2613: gap of      100 bp
*     2614     3394: contig of 781 bp in length
*     3395 3494: gap of      100 bp
*     3495     4270: contig of 776 bp in length
*     4271 4370: gap of      100 bp
*     4371     5160: contig of 790 bp in length
*     5161 5260: gap of      100 bp
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*     6050 6149: gap of      100 bp
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Db 68144 AAAAAAACAAACACNCCCCCCCCCCCCCCCCCCCCCNCCCCCCCCCCCCCCCCCCCC 68085

Qy     202 cccaccccttcgctcgcaatcccatcaccatgaccctcacgcctggcgcgccgac 261
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Qy     262 ctctcc 267
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RESULT 14

AC080179/c

LOCUS AC080179 54450 bp DNA HTG 16-JAN-2001

DEFINITION Homo sapiens chromosome X clone RP11-266P16 map X, LOW-PASS

SEQUENCE SAMPLING.

ACCESSION AC080179

VERSION AC080179.2 GI:12232512

KEYWORDS HTG; HTGS_PHASE0.

SOURCE human.

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 54450)

AUTHORS Birren,B., Linton,L., Nusbaum,C. and Lander,E.

TITLE Homo sapiens chromosome X, clone RP11-266P16

JOURNAL Unpublished

REFERENCE 2 (bases 1 to 54450)

AUTHORS Birren,B., Linton,L., Nusbaum,C., Lander,E., Abraham,H., Allen,N., Anderson,S., Barna,N., Bastien,V., Beda,F., Boguslavkiy,L., Boukhgalter,B., Brown,A., Burkett,G., Campopiano,A., Castle,A., Choepel,Y., Colangelo,M., Collins,S., Collymore,A., Cooke,P., DeArellano,K., Dewar,K., Diaz,J.S., Dodge,S., Ferreira,P., FitzHugh,W., Gage,D., Galagan,J., Gardyna,S., Ginde,S., Goyette,M., Graham,L., Grand-Pierre,N., Hagos,B., Heaford,A., Horton,L., Iliev,I., Johnson,R., Jones,C., Kann,L., Karatas,A., LaRocque,K., Lamazares,R., Landers,T., Lehoczký,J., Levine,R., Lieu,C., Liu,G., Macdonald,P., Marquis,N., McCarthy,M., McEwan,P., McKernan,K., McPheeters,R., Meldrim,J., Meneus,L., Mihova,T., Mlenga,V., Morrow,J., Murphy,T., Naylor,J., Norman,C.H., O'Connor,T., O'Donnell,P., O'Neil,D., Oliver,T.M., Oliver,J., Peterson,K., Pierre,N., Pisani,C., Pollara,V., Raymond,C., Rieback,M., Riley,R., Rogov,P., Rothman,D., Roy,A., Santos,R., Schauer,S., Severy,P., Sougnez,C., Spencer,B., Stange-Thomann,N., Stojanovic,N., Strauss,N., Subramanian,A., Talamas,J., Tesfaye,S., Theodore,J., Tirrell,A., Travers,M., Trigilio,J., Vassiliev,H., Viel,R., Vo,A., Wilson,B., Wu,X., Wyman,D., Ye,W.J., Young,G., Zainoun,J., Zimmer,A. and Zody,M.

TITLE Direct Submission

JOURNAL Submitted (28-SEP-2000) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA

COMMENT On Jan 16, 2001 this sequence version replaced gi:10334899.

All repeats were identified using RepeatMasker:

Smit, A.F.A. & Green, P. (1996-1997)

<http://ftp.genome.washington.edu/RM/RepeatMasker.html>

----- Genome Center

Center: Whitehead Institute/ MIT Center for Genome Research

Center code: WIBR

Web site: <http://www-seq.wi.mit.edu>

Contact: sequence_submissions@genome.wi.mit.edu

----- Project Information

Center project name: L11199

Center clone name: 266_P_16

* NOTE: This record contains 67 individual

* sequencing reads that have not been assembled into

* contigs. Runs of N are used to separate the reads
 * and the order in which they appear is completely
 * arbitrary. Low-pass sequence sampling is useful for
 * identifying clones that may be gene-rich and allows
 * overlap relationships among clones to be deduced.
 * However, it should not be assumed that this clone
 * will be sequenced to completion. In the event that
 * the record is updated, the accession number will
 * be preserved.

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 Bacteria; Proteobacteria; alpha subdivision; *Caulobacter* group;
Caulobacter.
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 AUTHORS Nierman, W.C., Feldblyum, T.V., Laub, M.T., Paulsen, I.T., Nelson, K.E.,
 Eisen, J., Heidelberg, J.F., Alley, M.R.K., Ohta, N., Maddock, J.R.,
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 Berry, K., Utterback, T., Tran, K., Wolf, A., Vamathevan, J.,
 Ermolaeva, M., White, O., Salzberg, S.L., Venter, J.C., Shapiro, L. and
 Fraser, C.M.
 TITLE Complete genome sequence of *Caulobacter crescentus*
 JOURNAL Proc. Natl. Acad. Sci. U.S.A. 98 (7), 4136-4141 (2001)
 MEDLINE 21173698
 REFERENCE 2 (bases 1 to 11070)
 AUTHORS Nierman, W.C., Feldblyum, T.V., Paulsen, I.T., Nelson, K.E., Eisen, J.,
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 JOURNAL Submitted (31-JAN-2001) The Institute for Genomic Research, 9712
 Medical Center Dr, Rockville, MD 20850, USA
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ESKYDSYQSGTTLVNGVSTPVTVAATGGKFVPLTPRWMNKTIARVNLGKFDAQISGDY
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gene complement(6325..8100)
/ gene="CC0723"
CDS complement(6325..8100)
/ gene="CC0723"
/note="identified by match to protein family HMM"
/codon_start=1
/transl_table=11
/product="sensor histidine kinase / response regulator"
/protein_id="AAK22708.1"
/db_xref="GI:13421950"
/translation="MRPFATCKGAARTSLVSFPRTSAALPRFAEWLDQDVTSVTARS
LPTLGVRLAICAATALIYALAVDLQGGLLWGLAVASAEAAVFICSSPQRADRKISHAQ
RLSYVAVAWMNIVWWSLAIMLWRQDHPALRMAALCVVCAFLVHAQAFTARSKTLLLI
VGGSATLLLLVLCGVLNDFPPSERLALCAAAILIITYAKAAQTNGQQGRALELAKSQ
AEAASQAKSEFLALMSHELRTPLNGLGLSQALKLEPLEPGEREQVELLEESGRLLA
LLNDVLDMAKIEAGKLDIAPTQEDLSRLAERVVRINQAQAREKGTEITLEIDPATPRA
LLFDPLRVQRCLGNLVSNAVKFTPAGQIRVRVTCEAGDQPDRLAKIIVSDTGVMGMP
AVLARIFTPEQADPTIARRTGGTGLGLNITRRLAQMMGGSVSVRSTEGKGSTFTLTF
GCRLPSAGAAETGGPLSGEHLRLLVDDYAVNRKVIAMMLAPLGCEIVEADNGQRAL
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GMDGFIEKPIEMSTLVSTLARVARR"
gene complement(8170..8379)
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CDS complement(8170..8379)
/ gene="CC0724"
/note="identified by Glimmer2; putative"
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/translation="MIEELDTVALLIDKPALGLEKGLIGAVVYVHGAHEAFEVEFVDD
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CDS complement(8376..8720)

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/note="identified by Glimmer2; putative"
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gene      complement(8725. .9666)
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CDS       complement(8725. .9666)
          /gene="CC0726"
          /note="identified by match to PFAM  protein family HMM
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          /protein_id="AAK22711.1"
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ADQAAKIAGVRKVLLAESDALGHGVAEAQADAVLALAGNYDAILVPATSGGKNFAPRV
AAKLDVAPISEIVDVVAADTFTRPIYAGNALETVQSSDSKKVITVRPTAFAAAAEGGS
ASVESVSGADAAKTRFVSEEMVKSDRPELAAAKIVVSGGRAMGSAEEFQRVIEPLADK
LGAAVGASRAAVDAGYAPNDYQVGQTGKVVPQLYVAIGISGAIQHLAGMKDSKVIVA
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Query Match          9.5%;  Score 39;  DB 1;  Length 11070;
Best Local Similarity 51.4%;  Pred. No. 5.8;
Matches  90;  Conservative  0;  Mismatches  85;  Indels  0;  Gaps  0;

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```

Qy   105 ccaaaccaaccaacacttcaaccaaaccaccacaacaatgccttcagtaaccaggcccg 164
      | | | | | | | | | | | | | | | | | | | | | | | | | |
Db   2860 CGAAATCTCCAGCCTCTTCGGTTTTGCGGCCTTGTCCTGCCCTCCTCCTCCCCGGCGC 2801

Qy   165 tctcatgtggcgtagcgctcgcccgcgcatggttagagccccacccttcgctcgcaatcc 224
      | | | | | | | | | | | | | | | | | | | | | | | | | |
Db   2800 CCCATGGTGGCGCGCGCGGCGTCCACGCTGACCGCCGGCCGTTCTCCTGGCCCGCAACCG 2741

Qy   225 catcaccatgaccctcaagcctggcgcgccgcccacacctccaagaaagtcgtg 279
      | | | | | | | | | | | | | | | | | | | | | | | | | |
Db   2740 GATCACCAAGGCGTTCCGCGCCTGGTTTCGAGGTTTCAGGGCTTCGAGGAAGTCGAG 2686

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Search completed: February 7, 2002, 11:10:46
Job time: 10172 sec

GenCore version 4.5
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OM nucleic - nucleic search, using sw model

Run on: February 7, 2002, 11:00:07 ; Search time 428.31 Seconds
 (without alignments)
 822.677 Million cell updates/sec

Title: US-09-394-745-6603
 Perfect score: 411
 Sequence: 1 agcaaaagcatagagatcca.....aggagaagaggaagggaccg 411

Scoring table: IDENTITY_NUC
 Gapop 10.0 , Gapext 1.0

Searched: 930621 seqs, 428662619 residues

Total number of hits satisfying chosen parameters: 1861242

Minimum DB seq length: 0
 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
 Maximum Match 100%
 Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

		%					
Result		Query					
No.	Score	Match	Length	DB	ID		Description
c	1	44.2	10.8	729	21	AAF09358	Fusarium venenatum
	2	39	9.5	4674	21	AAA14666	Nucleotide sequenc

	3	39	9.5	4725	21	AAA14665	Nucleotide sequenc
	4	39	9.5	4737	21	AAA14668	Nucleotide sequenc
	5	39	9.5	4767	21	AAA14667	Nucleotide sequenc
	6	39	9.5	4818	21	AAA14669	Nucleotide sequenc
	7	37	9.0	432	22	AAH52032	Mycobacterium tube
c	8	35.8	8.7	4932	20	AAX87629	Human insulin gene
	9	35.6	8.7	839	22	AAH00213	Bifidobacterium lo
	10	35.6	8.7	31422	21	AAA92302	S. avermitilis ave
	11	35.4	8.6	12381	21	AAZ58381	Streptomyces averm
	12	35.4	8.6	30690	21	AAA92301	S. avermitilis ave
c	13	34.8	8.5	114955	20	AAX53491	Human adenosine A1
	14	34.2	8.3	2634	19	AAV22334	Microbispora therm
	15	34	8.3	913	22	AAF67759	Corynebacterium gl
	16	34	8.3	1704	22	AAH65415	C glutamicum codin
c	17	34	8.3	349980	22	AAH68525	C glutamicum codin
	18	33.8	8.2	1973	22	AAI13556	Probe #3489 for ge
	19	33.8	8.2	1973	22	AAI34918	Probe #3604 used t
	20	33.8	8.2	1973	22	AAI03446	Probe #3437 used t
	21	33.4	8.1	1337	20	AAZ17263	Human gene express
	22	33.4	8.1	52253	21	AAA81478	N. meningitidis pa
c	23	33.4	8.1	349980	21	AAF21544	Neisseria meningit
c	24	33.4	8.1	1437668	21	AAA81490	N. meningitidis B
c	25	33.2	8.1	401	22	AAI14063	Probe #3996 for ge
c	26	33.2	8.1	401	22	AAI35443	Probe #4129 used t
c	27	33.2	8.1	401	22	AAI03921	Probe #3912 used t
c	28	33.2	8.1	446	22	AAI23276	Probe #13209 for g
c	29	33.2	8.1	446	22	AAI48596	Probe #17282 used
c	30	33.2	8.1	446	22	AAI08921	Probe #8912 used t
	31	33.2	8.1	936	22	AAF58252	Oligonucleotide D1
	32	33.2	8.1	936	22	AAF58254	Oligonucleotide D1
	33	33.2	8.1	936	22	AAF58257	Oligonucleotide D1
	34	33.2	8.1	936	22	AAF58259	Oligonucleotide D2
	35	33.2	8.1	936	22	AAF58262	Oligonucleotide D2
	36	33.2	8.1	938	22	AAF58255	Oligonucleotide D1
	37	33.2	8.1	1635	22	AAI22780	Probe #12713 for g
	38	33.2	8.1	1635	22	AAI48082	Probe #16768 used
	39	33.2	8.1	1635	22	AAI08454	Probe #8445 used t
	40	33	8.0	465	22	AAI10303	Probe #236 for gen
	41	33	8.0	465	22	AAI31554	Probe #240 used to
	42	33	8.0	465	22	AAI00239	Probe #230 used to
	43	33	8.0	822	22	AAH00987	Mycobacterium gord
	44	33	8.0	825	22	AAH00985	Mycobacterium aviu
	45	33	8.0	1827	22	AAF67757	Corynebacterium gl

ALIGNMENTS

RESULT 1
 AAF09358/c
 ID AAF09358 standard; cDNA; 729 BP.
 XX
 AC AAF09358;
 XX
 DT 13-MAR-2001 (first entry)
 XX
 DE Fusarium venenatum EST SEQ ID NO:1881.

XX
 KW Multiple gene expression; filamentous fungal cell; EST;
 KW expressed sequence tag; Fusarium venenatum; Aspergillus niger;
 KW Aspergillus oryzae; Trichoderma reesei; identification; recombination;
 KW culture condition; environmental stress; spore morphogenesis;
 KW metabolic pathway engineering; catabolic pathway engineering; ss.
 XX
 OS Fusarium venenatum.
 XX
 PN WO200056762-A2.
 XX
 PD 28-SEP-2000.
 XX
 PF 22-MAR-2000; 2000WO-US07781.
 XX
 PR 22-MAR-1999; 99US-0273623.
 XX
 PA (NOVO) NOVO NORDISK BIOTECH INC.
 PA (NOVO) NOVO NORDISK AS.
 XX
 PI Berka RM, Rey MW, Shuster JR, Kauppinen S, Clausen IG, Olsen PB;
 XX
 DR WPI; 2000-594572/56.
 XX
 PT Monitoring differential expression of genes in filamentous fungal cells
 PT uses fluorescence-labeled nucleic acids isolated from the cells and a
 PT substrate of expressed sequence tags -
 XX
 PS Claim 86; Page 1085-1086; 3161pp; English.
 XX
 CC The present invention describes a method for monitoring differential
 CC expression of genes in a first filamentous fungal (FF) cell relative to
 CC expression of the same genes in one or more second filamentous fungal
 CC cells. The method uses fluorescence-labeled nucleic acids isolated from
 CC the FF cells and a substrate of expressed sequence tags (EST). The ESTs
 CC are used in the methods for monitoring differential expression of genes
 CC in a first filamentous fungal (FF) cell relative to expression of the
 CC same genes in one or more second filamentous fungal cells. Monitoring
 CC the global expression of genes from FF cells allows the production
 CC potential of the microorganisms to be improved. New genes may be
 CC discovered, possible functions of unknown open reading frames can be
 CC identified and gene copy number variation and stability can be
 CC monitored. The expression of genes can be used to study how FF cells
 CC adapt to changes in culture conditions, environmental stress, spore
 CC morphogenesis, recombination, metabolic or catabolic pathway
 CC engineering. Using ESTs provides several advantages over genomic or
 CC random cDNA clones including elimination of redundancy as one spot on an
 CC array equals one gene or open reading frame, and organisation of the
 CC microarrays based on function of the gene products to facilitate
 CC analysis of the results. AAF07478 to AAF11247 represents ESTs from
 CC Fusarium venenatum; AAF11248 to AAF11853 represents ESTs from Aspergillus
 CC niger; AAF11854 to AAF14878 represents ESTs from Aspergillus oryzae; and
 CC AAF14879 to AAF15337 represents ESTs from Trichoderma reesei, which are
 CC all specifically claimed in the present invention.
 XX
 SQ Sequence 729 BP; 202 A; 118 C; 202 G; 206 T; 1 other;

Query Match 10.8%; Score 44.2; DB 21; Length 729;
 Best Local Similarity 53.1%; Pred. No. 0.0011;
 Matches 94; Conservative 0; Mismatches 83; Indels 0; Gaps 0;

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Qy 184 gccgcggcatggtagagccccacccttcgctcgcaatcccatcaccatgaccctcac 243
    ||| || | | || | ||||| || || || | |
Db 459 GCCGGCCGAGCTATGGAATCTCACCCCTTCGAGCGTCTTCCCCGAAGCTCAGAAGCCCGCT 400

Qy 244 gcctggcgcgccgcgcgacctctccaagaaagtcgtgaagacaagcactgtcttcttcccc 303
    | |||| | | |||| || | | | |||||
Db 399 TCTCCTGATTACGCCAAGATGTTCAAGAGAGTTGGCAGCCAAGCCCTCTTCTTCTCCCT 340

Qy 304 ttctatgcaggtatccttggatggccagtcgcagccgcctggtggttcaacggaaac 360
    || || | ||||| |||| | || || | ||
Db 339 GGCTTCGCTGTCATCCTTGGCTGGCCTTTGGCTGCCAGTATGCCTTTGACGGTAGAC 283
  
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RESULT 2

AAA14666

ID AAA14666 standard; DNA; 4674 BP.

XX

AC AAA14666;

XX

DT 08-AUG-2000 (first entry)

XX

DE Nucleotide sequence of modified FK-520 PKS gene cluster module 8.

XX

KW FK-520; polyketide synthase; PKS; gene cluster; immunosuppressant;
 KW immunophilin; FK-506 binding protein; polyketide compound; uveitis;
 KW transplant rejection; graft-versus-host disease; alopecia universalis;
 KW autoimmune chronic active hepatitis; inflammatory bowel disease;
 KW multiple sclerosis; primary biliary cirrhosis; scleroderma;
 KW neurite outgrowth; nerve regrowth; Parkinson's disease;
 KW Alzheimer's disease; stroke; traumatic spinal cord; brain injury;
 KW peripheral neuropathy; ss.

XX

OS Synthetic.

OS Streptomyces hygroscopicus.

XX

FH Key Location/Qualifiers

FT CDS 3..4673

FT /*tag= a

FT /note= "no termination codon given"

XX

PN WO200020601-A2.

XX

PD 13-APR-2000.

XX

PF 01-OCT-1999; 99WO-US22886.

XX

PR 02-OCT-1998; 98US-0102748.

PR 11-MAR-1999; 99US-0123810.

PR 17-JUN-1999; 99US-0139650.

XX

PA (KOSA-) KOSAN BIOSCIENCES INC.

XX

PI Reeves C, Chu D, Khosla C, Santi D, Wu K;
XX
DR WPI; 2000-317716/27.
DR P-PSDB; AAY84730.
XX
PT New isolated polyketide synthase nucleic acid and polyketide compounds,
PT useful for treating e.g. transplant rejection, uveitis, multiple
PT sclerosis, Alzheimer's disease, Parkinson's disease, stroke, or
PT peripheral neuropathy -
XX
PS Example 2; Page 93-96; 126pp; English.
XX
CC The present sequence represents module 8 of the FK-520 polyketide
CC synthase (PKS) gene cluster, containing the acyltransferase (AT)
CC domain of module 12 of rapamycin. FK-506 is a potent immunosuppressant,
CC and acts through initial formation of an intermediate complex with
CC protein immunophilins known as FK-506 binding proteins. The nucleic
CC acids are used for producing polyketide compounds. The polyketide
CC compounds can be used as immunosuppressants to prevent or treat
CC transplant rejection, graft-versus-host disease or uveitis. They can
CC also be used for treating e.g. alopecia universalis, autoimmune
CC chronic active hepatitis, inflammatory bowel disease, multiple
CC sclerosis, primary biliary cirrhosis, or scleroderma. They
CC also have neurotrophic activity and can be used to promote neurite
CC outgrowth in NGF-treated PC12 cells and in sensory neuronal cultures,
CC and in intact animals, they promote regrowth of damaged facial and
CC sciatic nerves, and repair lesioned serotonin and dopamine neurons in
CC the brain. They can also be used for treating e.g. Parkinson's disease,
CC Alzheimer's disease, stroke, traumatic spinal cord and brain injury, or
CC peripheral neuropathies. They can also be used in agricultural and
CC veterinary applications.
XX
SQ Sequence 4674 BP; 704 A; 1873 C; 1464 G; 633 T; 0 other;

Query Match 9.5%; Score 39; DB 21; Length 4674;
Best Local Similarity 47.7%; Pred. No. 0.086;
Matches 114; Conservative 0; Mismatches 125; Indels 0; Gaps 0;

Qy 105 ccaaaccaaccaacacttcaaccaaaccaccacaacaatgccttcagtaaccaggcccg 164
||||| || |||| | ||| ||| | | | | | | ||| ||
Db 4250 ccaaatcacccaagccctcacccacataccacaacccctcaccggcatcttccacaccgc 4309
Qy 165 tctcatgtggcgtagcgctcgcccgccgcatggttagagccccacccttcgctcgcaatcc 224
|| || ||| || | || | |||| | || | || |
Db 4310 cgccaccctcgacgacgccaccctcaccaacctcaccoccccaacacctcaccaccacct 4369
Qy 225 catcaccatgaccctcagcctggcgccgcccgcacctctccaagaaagtcgtgaagac 284
| ||| || ||||| || | | ||| || | || ||
Db 4370 ccaacccaaagccgacgcccgcctggcacctccaccaccacacccaaaaccaacccctcac 4429
Qy 285 aagcactgtcttcttcccttctatgcaggatccttggatggccagtcgcagccgcct 343
| ||| ||| || | || | ||| || | || | ||| ||
Db 4430 ccacttcgtcctctactccagcgccgcccaccctcggcagccccggccaagccaact 4488

RESULT 3

AAA14665
 ID AAA14665 standard; DNA; 4725 BP.
 XX
 AC AAA14665;
 XX
 DT 08-AUG-2000 (first entry)
 XX
 DE Nucleotide sequence of FK-520 PKS gene cluster module 8.
 XX
 KW FK-520; polyketide synthase; PKS; gene cluster; immunosuppressant;
 KW immunophilin; FK-506 binding protein; polyketide compound; uveitis;
 KW transplant rejection; graft-versus-host disease; alopecia universalis;
 KW autoimmune chronic active hepatitis; inflammatory bowel disease;
 KW multiple sclerosis; primary biliary cirrhosis; scleroderma;
 KW neurite outgrowth; nerve regrowth; Parkinson's disease;
 KW Alzheimer's disease; stroke; traumatic spinal cord; brain injury;
 KW peripheral neuropathy; ss.
 XX
 OS Streptomyces hygroscopicus.
 XX
 FH Key Location/Qualifiers
 FT CDS 3..4724
 FT /*tag= a
 FT /note= "no termination codon given"
 XX
 PN WO200020601-A2.
 XX
 PD 13-APR-2000.
 XX
 PF 01-OCT-1999; 99WO-US22886.
 XX
 PR 02-OCT-1998; 98US-0102748.
 PR 11-MAR-1999; 99US-0123810.
 PR 17-JUN-1999; 99US-0139650.
 XX
 PA (KOSA-) KOSAN BIOSCIENCES INC.
 XX
 PI Reeves C, Chu D, Khosla C, Santi D, Wu K;
 XX
 DR WPI; 2000-317716/27.
 DR P-PSDB; AAY84729.
 XX
 PT New isolated polyketide synthase nucleic acid and polyketide compounds,
 PT useful for treating e.g. transplant rejection, uveitis, multiple
 PT sclerosis, Alzheimer's disease, Parkinson's disease, stroke, or
 PT peripheral neuropathy -
 XX
 PS Example 2; Page 90-93; 126pp; English.
 XX
 CC The present sequence encodes module 8 of the FK-520 polyketide
 CC synthase (PKS) gene cluster of strain MA6548. FK-506 is a potent
 CC immunosuppressant, and acts through initial formation of an
 CC intermediate complex with protein immunophilins known as FK-506
 CC binding proteins. The nucleic acids are used for producing polyketide
 CC compounds. The polyketide compounds can be used as immunosuppressants to
 CC prevent or treat transplant rejection, graft-versus-host disease or
 CC uveitis. They can also be used for treating e.g. alopecia universalis,

CC autoimmune chronic active hepatitis, inflammatory bowel disease,
CC multiple sclerosis, primary biliary cirrhosis, or scleroderma. They
CC also have neurotrophic activity and can be used to promote neurite
CC outgrowth in NGF-treated PC12 cells and in sensory neuronal cultures,
CC and in intact animals, they promote regrowth of damaged facial and
CC sciatic nerves, and repair lesioned serotonin and dopamine neurons in
CC the brain. They can also be used for treating e.g. Parkinson's disease,
CC Alzheimer's disease, stroke, traumatic spinal cord and brain injury, or
CC peripheral neuropathies. They can also be used in agricultural and
CC veterinary applications.

XX

SQ Sequence 4725 BP; 728 A; 2034 C; 1394 G; 569 T; 0 other;

Query Match 9.5%; Score 39; DB 21; Length 4725;
Best Local Similarity 47.7%; Pred. No. 0.086;
Matches 114; Conservative 0; Mismatches 125; Indels 0; Gaps 0;

Qy 105 ccaaaccaaccaacttcaacaaaccaccacaacaatgccttcagtaaccaggcccg 164
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Db 4301 ccaaatcacccaagccctcacccacataccacaacccctcaccggcatcttcacaccgc 4360

Qy 165 tctcatgtggcgtagcgctgccccgcgcatggtagagccccaccccttcgctcgcaatcc 224
|| || ||| || || | |||| | | || | || |
Db 4361 cgccaccctcgacgacgccaccctcaccaacctcaccaccaaacacctcaccaccaccct 4420

Qy 225 catcaccatgaccctcacgcctggcgcgccgacacctctccaagaaagtcgtgaagac 284
| ||| || ||||| | | | ||| | || | ||
Db 4421 ccaacccaaagccgacgcccgcctggcacctccaccaccacacccaaaaccaaccctcac 4480

Qy 285 aagcactgtcttcttcccttctatgcaggtatccttggatggccagtcgcagccgcct 343
| ||| ||| || | || | ||| || | || | ||| ||
Db 4481 ccacttcgtcctctactccagcgccgcccaccctcggcagccccggccaagccaact 4539

RESULT 4

AAA14668

ID AAA14668 standard; DNA; 4737 BP.

XX

AC AAA14668;

XX

DT 08-AUG-2000 (first entry)

XX

DE Nucleotide sequence of modified FK-520 PKS gene cluster module 8.

XX

KW FK-520; polyketide synthase; PKS; gene cluster; immunosuppressant;
KW immunophilin; FK-506 binding protein; polyketide compound; uveitis;
KW transplant rejection; graft-versus-host disease; alopecia universalis;
KW autoimmune chronic active hepatitis; inflammatory bowel disease;
KW multiple sclerosis; primary biliary cirrhosis; scleroderma;
KW neurite outgrowth; nerve regrowth; Parkinson's disease;
KW Alzheimer's disease; stroke; traumatic spinal cord; brain injury;
KW peripheral neuropathy; ss.

XX

OS Synthetic.

OS Streptomyces hygroscopicus.

XX

FH Key Location/Qualifiers
 FT CDS 3..4736
 FT /*tag= a
 FT /note= "no termination codon given"
 XX
 PN WO200020601-A2.
 XX
 PD 13-APR-2000.
 XX
 PF 01-OCT-1999; 99WO-US22886.
 XX
 PR 02-OCT-1998; 98US-0102748.
 PR 11-MAR-1999; 99US-0123810.
 PR 17-JUN-1999; 99US-0139650.
 XX
 PA (KOSA-) KOSAN BIOSCIENCES INC.
 XX
 PI Reeves C, Chu D, Khosla C, Santi D, Wu K;
 XX
 DR WPI; 2000-317716/27.
 DR P-PSDB; AAY84732.
 XX
 PT New isolated polyketide synthase nucleic acid and polyketide compounds,
 PT useful for treating e.g. transplant rejection, uveitis, multiple
 PT sclerosis, Alzheimer's disease, Parkinson's disease, stroke, or
 PT peripheral neuropathy -
 XX
 PS Example 2; Page 99-102; 126pp; English.
 XX
 CC The present sequence represents module 8 of the FK-520 polyketide
 CC synthase (PKS) gene cluster, containing the acyltransferase (AT)
 CC domain of module 12 of rapamycin. FK-506 is a potent immunosuppressant,
 CC and acts through initial formation of an intermediate complex with
 CC protein immunophilins known as FK-506 binding proteins. The nucleic
 CC acids are used for producing polyketide compounds. The polyketide
 CC compounds can be used as immunosuppressants to prevent or treat
 CC transplant rejection, graft-versus-host disease or uveitis. They can
 CC also be used for treating e.g. alopecia universalis, autoimmune
 CC chronic active hepatitis, inflammatory bowel disease, multiple
 CC sclerosis, primary biliary cirrhosis, or scleroderma. They
 CC also have neurotrophic activity and can be used to promote neurite
 CC outgrowth in NGF-treated PC12 cells and in sensory neuronal cultures,
 CC and in intact animals, they promote regrowth of damaged facial and
 CC sciatic nerves, and repair lesioned serotonin and dopamine neurons in
 CC the brain. They can also be used for treating e.g. Parkinson's disease,
 CC Alzheimer's disease, stroke, traumatic spinal cord and brain injury, or
 CC peripheral neuropathies. They can also be used in agricultural and
 CC veterinary applications.
 XX
 SQ Sequence 4737 BP; 718 A; 1927 C; 1472 G; 620 T; 0 other;

Query Match 9.5%; Score 39; DB 21; Length 4737;
 Best Local Similarity 47.7%; Pred. No. 0.087;
 Matches 114; Conservative 0; Mismatches 125; Indels 0; Gaps 0;

Qy 105 ccaaaccaaccaacacttcaaccaaaccaccacaacaatgccttcagtaacccaggcccg 164

```

      ||||| || |||| | ||| ||| | | | | | | | ||| ||
Db   4313 ccaaatacaccgaagccctcacccacataccacaacccctcaccggcatcttccacaccgc 4372

Qy   165 tctcatgtggcgtagcggtcgcccgcgccatggttagagccccacccttcgctcgcaatcc 224
      ||          || | ||| | || | | ||||| | | || | || |
Db   4373 cgccaccctcgacgacgccaccctcaccaacctcaccctcccaacacctcaccaccacct 4432

Qy   225 catcaccatgaccctcagcgctggcgcgccgacgtctccaagaaagtcgtgaagac 284
      |   |||  ||  ||||| || | | | ||| | || | ||
Db   4433 ccaacccaaagccgacgcccgtggcacctccaccaccacacccaaaaccaaccctcac 4492

Qy   285 aagcaactgtcttcttcccttcttatgcaggtatccttggatggccagtcgcagccgcct 343
      |   ||| ||| | || | | || | | ||| || | ||| ||
Db   4493 ccacttcgtcctctactccagcgccgcccaccctcggcagccccggccaagccaact 4551

```

RESULT 5

AAA14667

ID AAA14667 standard; DNA; 4767 BP.

XX

AC AAA14667;

XX

DT 08-AUG-2000 (first entry)

XX

DE Nucleotide sequence of modified FK-520 PKS gene cluster module 8.

XX

KW FK-520; polyketide synthase; PKS; gene cluster; immunosuppressant;
KW immunophilin; FK-506 binding protein; polyketide compound; uveitis;
KW transplant rejection; graft-versus-host disease; alopecia universalis;
KW autoimmune chronic active hepatitis; inflammatory bowel disease;
KW multiple sclerosis; primary biliary cirrhosis; scleroderma;
KW neurite outgrowth; nerve regrowth; Parkinson's disease;
KW Alzheimer's disease; stroke; traumatic spinal cord; brain injury;
KW peripheral neuropathy; ss.

XX

OS Synthetic.

OS Streptomyces hygroscopicus.

XX

FH Key Location/Qualifiers

FT CDS 3..4766

FT /*tag= a

FT /note= "no termination codon given"

XX

PN WO200020601-A2.

XX

PD 13-APR-2000.

XX

PF 01-OCT-1999; 99WO-US22886.

XX

PR 02-OCT-1998; 98US-0102748.

PR 11-MAR-1999; 99US-0123810.

PR 17-JUN-1999; 99US-0139650.

XX

PA (KOSA-) KOSAN BIOSCIENCES INC.

XX

PI Reeves C, Chu D, Khosla C, Santi D, Wu K;

XX

DR WPI; 2000-317716/27.
 DR P-PSDB; AAY84731.
 XX
 PT New isolated polyketide synthase nucleic acid and polyketide compounds,
 PT useful for treating e.g. transplant rejection, uveitis, multiple
 PT sclerosis, Alzheimer's disease, Parkinson's disease, stroke, or
 PT peripheral neuropathy -
 XX
 PS Example 2; Page 96-99; 126pp; English.
 XX
 CC The present sequence represents module 8 of the FK-520 polyketide
 CC synthase (PKS) gene cluster, containing the acyltransferase (AT)
 CC domain of module 13 of rapamycin. FK-506 is a potent immunosuppressant,
 CC and acts through initial formation of an intermediate complex with
 CC protein immunophilins known as FK-506 binding proteins. The nucleic
 CC acids are used for producing polyketide compounds. The polyketide
 CC compounds can be used as immunosuppressants to prevent or treat
 CC transplant rejection, graft-versus-host disease or uveitis. They can
 CC also be used for treating e.g. alopecia universalis, autoimmune
 CC chronic active hepatitis, inflammatory bowel disease, multiple
 CC sclerosis, primary biliary cirrhosis, or scleroderma. They
 CC also have neurotrophic activity and can be used to promote neurite
 CC outgrowth in NGF-treated PC12 cells and in sensory neuronal cultures,
 CC and in intact animals, they promote regrowth of damaged facial and
 CC sciatic nerves, and repair lesioned serotonin and dopamine neurons in
 CC the brain. They can also be used for treating e.g. Parkinson's disease,
 CC Alzheimer's disease, stroke, traumatic spinal cord and brain injury, or
 CC peripheral neuropathies. They can also be used in agricultural and
 CC veterinary applications.
 XX
 SQ Sequence 4767 BP; 731 A; 1945 C; 1468 G; 623 T; 0 other;

Query Match 9.5%; Score 39; DB 21; Length 4767;
 Best Local Similarity 47.7%; Pred. No. 0.087;
 Matches 114; Conservative 0; Mismatches 125; Indels 0; Gaps 0;

```

Qy 105 ccaaaccaaccaacacttcaaccaaaccaccacaacaatgccttcagtaacccaggcccg 164
      ||||| || |||| | ||| ||| | | | | | | | | | ||| ||
Db 4343 ccaaatcacccaagccctcacccacataccacaacccctcaccggcatcttccacaccgc 4402

Qy 165 tctcatgtggcgtagcgctcgcccgcgccatggttagagccccaccccttcgctcgcaatcc 224
      || | | | | | | | | | | | | | | | | | | | | | |
Db 4403 cgccaccctcgacgacgccaccctcaccaacctcaccccccaacacctcaccaccaccct 4462

Qy 225 catcaccatgaccctcagcgctggcgcgccgacgtctccaagaaagtcgtgaagac 284
      | ||| || ||||| || | | ||| | | | | | ||
Db 4463 ccaacccaaagccgacgcccgtggcacctcaccaccacacccaaaaccaaccctcac 4522

Qy 285 aagcactgtcttcttcccttctatgcaggtatccttggtggccagtcgcagccgcct 343
      | ||| ||| || | | | | | | | | | | | | | ||| ||
Db 4523 ccacttcgtcctctactccagcgccgcccaccctcggcagccccggccaagccaact 4581

```

RESULT 6
 AAA14669
 ID AAA14669 standard; DNA; 4818 BP.

XX
 AC AAA14669;
 XX
 DT 08-AUG-2000 (first entry)
 XX
 DE Nucleotide sequence of modified FK-520 PKS gene cluster module 8.
 XX
 KW FK-520; polyketide synthase; PKS; gene cluster; immunosuppressant;
 KW immunophilin; FK-506 binding protein; polyketide compound; uveitis;
 KW transplant rejection; graft-versus-host disease; alopecia universalis;
 KW autoimmune chronic active hepatitis; inflammatory bowel disease;
 KW multiple sclerosis; primary biliary cirrhosis; scleroderma;
 KW neurite outgrowth; nerve regrowth; Parkinson's disease;
 KW Alzheimer's disease; stroke; traumatic spinal cord; brain injury;
 KW peripheral neuropathy; ss.
 XX
 OS Synthetic.
 OS Streptomyces hygroscopicus.
 XX
 FH Key Location/Qualifiers
 FT CDS 3..4817
 FT /*tag= a
 FT /note= "no termination codon given"
 XX
 PN WO200020601-A2.
 XX
 PD 13-APR-2000.
 XX
 PF 01-OCT-1999; 99WO-US22886.
 XX
 PR 02-OCT-1998; 98US-0102748.
 PR 11-MAR-1999; 99US-0123810.
 PR 17-JUN-1999; 99US-0139650.
 XX
 PA (KOSA-) KOSAN BIOSCIENCES INC.
 XX
 PI Reeves C, Chu D, Khosla C, Santi D, Wu K;
 XX
 DR WPI; 2000-317716/27.
 DR P-PSDB; AAY84733.
 XX
 PT New isolated polyketide synthase nucleic acid and polyketide compounds,
 PT useful for treating e.g. transplant rejection, uveitis, multiple
 PT sclerosis, Alzheimer's disease, Parkinson's disease, stroke, or
 PT peripheral neuropathy -
 XX
 PS Example 2; Page 102-105; 126pp; English.
 XX
 CC The present sequence represents module 8 of the FK-520 polyketide
 CC synthase (PKS) gene cluster, containing the acyltransferase (AT)
 CC domain of module 13 of rapamycin. FK-506 is a potent immunosuppressant,
 CC and acts through initial formation of an intermediate complex with
 CC protein immunophilins known as FK-506 binding proteins. The nucleic
 CC acids are used for producing polyketide compounds. The polyketide
 CC compounds can be used as immunosuppressants to prevent or treat
 CC transplant rejection, graft-versus-host disease or uveitis. They can
 CC also be used for treating e.g. alopecia universalis, autoimmune

CC chronic active hepatitis, inflammatory bowel disease, multiple
CC sclerosis, primary biliary cirrhosis, or scleroderma. They
CC also have neurotrophic activity and can be used to promote neurite
CC outgrowth in NGF-treated PC12 cells and in sensory neuronal cultures,
CC and in intact animals, they promote regrowth of damaged facial and
CC sciatic nerves, and repair lesioned serotonin and dopamine neurons in
CC the brain. They can also be used for treating e.g. Parkinson's disease,
CC Alzheimer's disease, stroke, traumatic spinal cord and brain injury, or
CC peripheral neuropathies. They can also be used in agricultural and
CC veterinary applications.

XX

SQ Sequence 4818 BP; 742 A; 1982 C; 1476 G; 618 T; 0 other;

Query Match 9.5%; Score 39; DB 21; Length 4818;
Best Local Similarity 47.7%; Pred. No. 0.087;
Matches 114; Conservative 0; Mismatches 125; Indels 0; Gaps 0;

Qy 105 ccaaaccaaccaacacttcaaccaaacaccacaacaatgccttcagtaaccaggcccg 164
||||| || |||| | ||| |||| | | | | | | | | ||| ||
Db 4394 ccaaatcacccaagccctcacccacataccacaacccctcaccggcatcttccacaccgc 4453

Qy 165 tctcatgtggcgtagcgctcgcccgcgccatggtagagccccaccccttcgctcgcaatcc 224
|| || ||| || | || | | |||| | | || | || |
Db 4454 cgccaccctcgacgacgccaccctcaccaacctcacccccacacctcaccaccaccct 4513

Qy 225 catcaccatgacccctcacgcctggcgcgccgacacctctccaagaaagtcgtgaagac 284
| ||| || ||||| || | | ||| | || | || ||
Db 4514 ccaacccaaagccgacgcccgcctggcacctccaccaccacacccaaaaccaaccctcac 4573

Qy 285 aagcactgtcttcttccccttctatgcaggtatccttgatggccagtcgcagccgcct 343
| ||| ||| || | || | ||| || | ||| | ||| ||
Db 4574 ccacttcgtcctctactccagcgccgcccaccctcggcagccccggccaagccaact 4632

RESULT 7

AAH52032

ID AAH52032 standard; DNA; 432 BP.

XX

AC AAH52032;

XX

DT 04-SEP-2001 (first entry)

XX

DE Mycobacterium tuberculosis potential drug target gene SEQ ID 86.

XX

KW Drug target; growth; organism viability; characterisation; ds.

XX

OS Mycobacterium tuberculosis.

XX

PN WO200135317-A1.

XX

PD 17-MAY-2001.

XX

PF 13-NOV-2000; 2000WO-US31152.

XX

PR 12-NOV-1999; 99US-0165086.

PR 12-NOV-1999; 99US-0165124.

PR 01-FEB-2000; 2000US-0179531.
 XX
 PA (REGC) UNIV CALIFORNIA.
 XX
 PI Eisenberg D, Rotstein SH, Marcotte EM;
 XX
 DR WPI; 2001-329193/34.
 DR P-PSDB; AAG81181.
 XX
 PT Identifying nucleotide or polypeptide sequence for use as drug target,
 PT involves providing algorithm that analyzes a functional relationship
 PT between nucleotide or polypeptide sequences, and comparing the
 PT sequences -
 XX
 PS Disclosure; Page 105; 207pp; English.
 XX
 CC This invention relates to a method for identifying a nucleotide or
 CC polypeptide sequence that may be a drug target, or essential for growth
 CC or viability of an organism. Polynucleotide sequences AAH51947 - AAH52092
 CC represent DNA encoding proteins AAG81096 - AAG81241, Mycobacterium
 CC tuberculosis proteins which are potential drug targets. The DNA and
 CC protein sequences are used to illustrate the method of the invention. The
 CC method involves providing an unknown nucleotide or polypeptide sequences,
 CC and comparing it to a number of sequences along with at least one
 CC algorithm capable of analysing a functional relationship between
 CC nucleotide and polypeptide sequences. The method is useful for
 CC characterising the function of nucleic acids and polypeptides that may be
 CC useful as a target for a drug or essential for the growth or viability of
 CC an organism.
 XX
 SQ Sequence 432 BP; 94 A; 139 C; 130 G; 69 T; 0 other;

Query Match 9.0%; Score 37; DB 22; Length 432;
 Best Local Similarity 53.0%; Pred. No. 0.14;
 Matches 79; Conservative 0; Mismatches 70; Indels 0; Gaps 0;

Qy 155 cccaggcccggtctcatgtggcgtagcggtcgcccgcggtacgtagagccccacccttcg 214
 || |||| | | |||| |||| || | | || | || || |
 Db 188 ccgaggcgagagcggttcctacgtaatctcgccgcggtaccgacgaacagcatcccgaca 247
 Qy 215 ctcgcaatcccatcaccatgacccctcacgcctggcgcgccgacgtctccaagaaag 274
 || | ||||| || | || | || || || || ||||| |
 Db 248 gtcaaggccggatcaccttgctgcccaccaccgcccgtacgcaagcctttccaaggact 307
 Qy 275 tcgtgaagacaagcactgtcttcttcccc 303
 ||| || || | || | || |
 Db 308 gtgtggtgatcggcgcggtcgactatctc 336

RESULT 8
 AAX87629/c
 ID AAX87629 standard; DNA; 4932 BP.
 XX
 AC AAX87629;
 XX
 DT 26-OCT-1999 (first entry)

XX
DE Human insulin gene.
XX
KW Insulin; preproinsulin; PPINS; human; epitope; autoantigen;
KW autoantibody; insulin-dependent diabetes mellitus; IDDM;
KW immunoassay; diagnosis; ss.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT CDS 2364..3482
FT /*tag= a
FT /note= "contains an intron, exonic nucleotides
FT 2424-2610 and 3397-3539 are included in
FT the claimed cDNA of Claim 8"
FT intron 2551..3336
FT /*tag= b
XX
PN EP940470-A2.
XX
PD 08-SEP-1999.
XX
PF 29-DEC-1998; 98EP-0660149.
XX
PR 29-JAN-1998; 98US-0015399.
XX
PA (WALL-) WALLAC OY.
XX
PI Hinkkanen A;
XX
DR WPI; 1999-481070/41.
DR P-PSDB; AAY06608.
XX
PT New fusion protein, useful for diagnosing insulin-dependent diabetes
PT mellitus
XX
PS Claim 8; Page 19-22; 27pp; English.
XX
CC This is the nucleotide sequence of the human insulin gene coding
CC for preproinsulin (PPINS, see AAY06608). The invention relates to a
CC fusion protein having epitopes of at least 2 of the autoantigens
CC glutamate decarboxylase (GAD65, see AAY06607), islet cell antigen
CC (IA2, see AAY06606) and PPINS, in which the epitopes are connected
CC via a linker peptide. The invention also provides cDNA encoding
CC the fusion protein, which includes nucleotides 2424-2610 and
CC 3397-3539 of the present sequence, a vector and an Escherichia coli
CC cell encompassing the cDNA. The fusion protein is used in an
CC immunoassay for the simultaneous detection of autoantibodies
CC related to insulin-dependent diabetes mellitus (IDDM). Up to 3
CC autoantibodies may be detected at once using the immunoassay. The
CC presence of autoantibodies against multiple autoantigens is rare
CC but is a strong indication of the (imminent) onset of IDDM, whereas
CC the presence of autoantibodies to just one of the autoantigens may
CC occur in healthy individuals.
XX
SQ Sequence 4932 BP; 835 A; 1531 C; 1736 G; 830 T; 0 other;

Query Match 8.7%; Score 35.8; DB 20; Length 4932;
Best Local Similarity 49.2%; Pred. No. 0.81;
Matches 94; Conservative 0; Mismatches 97; Indels 0; Gaps 0;

```
Qy      81 taccaatacacccatcccaaacactccaaaccaaccaacacttcaaccaaaccaccacaac 140
      | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db    1565 TCCCCACACCCCTGTCCCCAGACCCCTGTCCCCACACCCCTGTCCCCACACCCCTGTCCC 1506

Qy     141 aatgccttcagtaaacccaggcccggtctcatgtggcgtagcgctcgcccgcgccatggtaga 200
      | | | | | | | | | | | | | | | | | | | | | | | | | |
Db    1505 CAGACCCCTGTCCCCACACCCCTGTCCCCGGACCCCTGTCCCCACACCCCTGTCCCCAGA 1446

Qy     201 gccccacccttcgctcgcaatcccatcaccatgacccctcacgcctggcgcgccgccga 260
      | | | | | | | | | | | | | | | | | | | | | | | | | |
Db    1445 CCCCTGTCCCCACACCCCTGTCCCCACACCCCTGTCCCCAGACCCCTGTCCCCACACCCC 1386

Qy     261 cctctccaaga 271
      | | | | |
Db    1385 TGTCCCCAGGA 1375
```

RESULT 9

AAH00213

ID AAH00213 standard; DNA; 839 BP.

XX

AC AAH00213;

XX

DT 24-JUL-2001 (first entry)

XX

DE Bifidobacterium longum nucleotide sequence SEQ ID NO:204.

XX

KW Species specific; genus specific; family specific; probe; detection;

KW identification; algal; archaeal; bacterial; fungal; parasitical;

KW microorganism; diagnosis; translation elongation factor Tu; toxin;

KW translation elongation factor G; RecA recombinase; resistance;

KW catalytic subunit of proton-translocating ATPase; antimicrobial;

KW vaccine; primer; ds.

XX

OS Bifidobacterium longum.

XX

PN WO200123604-A2.

XX

PD 05-APR-2001.

XX

PF 28-SEP-2000; 2000WO-CA01150.

XX

PR 28-SEP-1999; 99CA-2283458.

PR 19-MAY-2000; 2000CA-2307010.

XX

PA (INFE-) INFECTIO DIAGNOSTIC (IDI) INC.

XX

PI Bergeron MG, Boissinot M, Huletsky A, Menard C, Ouellette M;

PI Picard FJ, Roy PH;

XX

DR WPI; 2001-245006/25.

XX

PT Nucleic acid sequences are used to generate universal probes and
PT primers which can be used to identify and detect the presence of algal,
PT archaeal, bacterial, fungal and parasitical species in a test sample -
XX
PS Claim 24; Page 527; 1580pp; English.
XX
CC The present invention describes a method for generating a repertoire of
CC nucleic acids of tuf, fus, atpD and/or recA genes from which probes
CC and/or primers are derived. The method comprises amplifying the nucleic
CC acids of determined algal, archaeal, bacterial, fungal and parasitical
CC species with a combination of defined primer pairs. The method can be
CC used for producing probes and/or primers for detecting one or more
CC related microorganisms e.g. algae, archaea, bacteria, fungi and
CC parasites, for universal detection and for specific and ubiquitous
CC detection and identification of an algal, archaeal, bacterial, fungal
CC and parasitical species, genus, family and group. A nucleic acid (I)
CC obtained using the method of the invention can be used for the universal
CC detection of any bacterium, fungus or parasite in a sample and for the
CC detection of at least one antimicrobial agent resistance gene or at
CC least one toxin gene. hexA nucleic acids are used for the specific and
CC ubiquitous detection and for identification of Streptococcus pneumoniae.
CC (I) can be used to design a therapeutic agent which is effective against
CC microorganisms. Microbial species or genus or family or phylum or group
CC which can be detected include Abiotrophia adiacens, Bordetella sp.,
CC Corynebacterium sp., Enterobacteriaceae group, Escherichia coli,
CC Mycobacteriaceae family, Pseudomonads group, Streptococcus sp.,
CC Neisseria gonorrhoeae and Staphylococcus sp.. Using DNA based tests
CC provides faster results than substrate specificity tests as results can
CC be determined in an hour and improved accuracy is also achieved.
CC AAH00010 to AAH002304 represent nucleotide sequences and primers/probes
CC which are given in the exemplification of the present invention.
XX
SQ Sequence 839 BP; 152 A; 291 C; 241 G; 155 T; 0 other;

Query Match 8.7%; Score 35.6; DB 22; Length 839;
Best Local Similarity 48.1%; Pred. No. 0.47;
Matches 101; Conservative 0; Mismatches 109; Indels 0; Gaps 0;

```

Qy      98 caacactccaaaccaaccaacacttcaaccaaaccaccacaacaatgccttcagtaaccc 157
      | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      471 ccaccgtcacctccatcgagaccttcacaagaccatggacgcctgcgaggctggcgaca 530

Qy      158 aggcccggtctcatgtggcgtagcgtagcccgcgccgcatggtagagccccacccttcgctc 217
      | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      531 acaccggtctgcttctgctgtggtctcgccggtgacgatgtcgagcgtggccaggttgtgg 590

Qy      218 gcaatcccatcaccatgacccctcacgcctggcgcgccgacgtctccaagaaagtgcg 277
      | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      591 ccaagccgggctccgtcaccgccgacaccaagttcgagggcggaagtctacgtgctgacca 650

Qy      278 tgaagacaagcactgtcttcttcccttct 307
      | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      651 aggacgaaggcgccggtcactcgccgttct 680

```

RESULT 10

AAA92302

ID AAA92302 standard; DNA; 31422 BP.

XX

AC AAA92302;

XX

DT 10-JAN-2001 (first entry)

XX

DE S. avermitilis avermectin aglycon synthase DNA aveAII SEQ ID NO:2.

XX

KW Streptomyces avermitilis; avermectin aglycon synthase; biosynthesis;

KW multifunctional enzyme; polyketide; avermectin; veterinary drug;

KW agrochemical; ds.

XX

OS Streptomyces avermitilis.

XX

FH Key Location/Qualifiers

FT CDS 1..14646

FT /*tag= a

FT /note= "avermectin aglycon synthase protein"

FT CDS 14824..31422

FT /*tag= b

FT /note= "avermectin aglycon synthase protein"

XX

PN WO200050605-A1.

XX

PD 31-AUG-2000.

XX

PF 23-FEB-2000; 2000WO-JP01041.

XX

PR 24-FEB-1999; 99JP-0046961.

XX

PA (KITA) KITASATO INST.

XX

PI Omura S, Ikeda H;

XX

DR WPI; 2000-565458/52.

DR P-PSDB; AAB23751, AAB23752.

XX

PT Avermectin aglycone synthase DNA and proteins encoded by all or part of

PT it for the production of avermectin and its derivatives for drug and

PT agrochemical use -

XX

PS Claim 2; Page 134-203; 314pp; Japanese.

XX

CC The present sequence represents DNA which encodes avermectin aglycon
CC synthase proteins. Also described are: (1) polypeptides encoded by all
CC or part of the DNA; (2) expression vectors containing the DNA; (3) host
CC cells transformed by the vectors; (4) preparation of the polypeptides
CC by culture of the transformants; (5) preparation of avermectin aglycon
CC or its derivatives by culture of transformed avermectin-producing
CC microorganisms; and (6) oligonucleotides of 5-60 bases in length
CC containing sense or antisense sequences from the avermectin aglycon
CC synthase DNA. The enzymes are useful for the production of modified
CC forms of avermectin and of the intermediates in its biosynthesis, for
CC use as drugs, veterinary drugs and agrochemicals.

XX

SQ Sequence 31422 BP; 4136 A; 10238 C; 11677 G; 5371 T; 0 other;

Query Match 8.7%; Score 35.6; DB 21; Length 31422;
Best Local Similarity 49.5%; Pred. No. 1.9;
Matches 92; Conservative 0; Mismatches 94; Indels 0; Gaps 0;

```
Qy      76 agcgataccaatacacccatcccaacactccaaaccaacacacttcaaccaaaccacc 135
      | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 28258 atcgaaatcagtcacccacccacccctcgctcccgccatcgaagacaccaccgaaaacacc 28317

Qy     136 acaacaatgccttcagtaaccaggcccggtctcatgtggcgtagcgtcgcccgcggcatg 195
      | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 28318 accgaaaacatcaccgcgacccggcagcctccgcccggcgacaacgacacccaccgcttc 28377

Qy     196 gtagagccccaccccttcgctcgcaatcccatcaccatgaccctcacgcctggcgcgcc 255
      | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 28378 ctcccgccctcgcccacacccacaccacggcattcggaacccaccacctggcaccac 28437

Qy     256 gccgac 261
      | |
Db 28438 cactac 28443
```

RESULT 11

AAZ58381

ID AAZ58381 standard; DNA; 12381 BP.

XX

AC AAZ58381;

XX

DT 23-MAY-2000 (first entry)

XX

DE Streptomyces avermitilis avermectin polyketide synthase modules 1+2.

XX

KW Polyketide synthase; avermectin; insecticide; ss.

XX

OS Streptomyces avermitilis.

XX

PN WO200001827-A2.

XX

PD 13-JAN-2000.

XX

PF 06-JUL-1999; 99WO-GB02158.

XX

PR 06-JUL-1998; 98GB-0014622.

XX

PA (BIOT-) BIOTICA TECHNOLOGY LTD.

PA (PFIZ) PFIZER INC.

XX

PI Kellenberger JL, Leadlay PF, Staunton J, Stutzman-Engwall KJ;

PI McArthur HAI;

XX

DR WPI; 2000-182117/16.

XX

PT Mutated Type I polyketide synthase containing a polylinker site in an

PT extension module for replacement of a reductive loop sequence, for

PT producing polyketides, e.g. B1 avermectin -

XX

PS Disclosure; Fig 7a-f; 75pp; English.
 XX
 CC The present sequence is that of DNA encoding the first 2 modules
 CC of the avermectin polyketide synthase (PKS) of Streptomyces
 CC avermitilis. The invention relates to nucleic acids encoding a
 CC Type I PKS such as avermectin in which a polylinker with multiple
 CC restriction sites replaces or 1 more PKS genes encoding enzymes
 CC associated with reduction. Novel PKS are provided in which in
 CC which the reductive loop in a selected module of the Type I PKS is
 CC replaced with the equivalent segment from the same or different
 CC PKS gene cluster or by a mutated or synthetic segment. Vectors and
 CC host cells, and methods for producing novel polyketides by
 CC culturing host cells are claimed. The polyketides obtained are
 CC useful as antibiotics and insecticides. Fermentation products
 CC containing C22-C23 dihydroavermectin, ivermectin and B1
 CC avermectins are claimed.
 XX
 SQ Sequence 12381 BP; 1884 A; 4561 C; 4005 G; 1931 T; 0 other;

Query Match 8.6%; Score 35.4; DB 21; Length 12381;
 Best Local Similarity 49.2%; Pred. No. 1.5;
 Matches 93; Conservative 0; Mismatches 96; Indels 0; Gaps 0;

Qy 96 cccaacactccaaaccaacacacttcaaccaaaccaccacaacaatgccttcagtaac 155
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 Db 5308 octcaccctccccaccacccaccaacccaccaaacctgggtcatcgccatccccgaaac 5367
 Qy 156 ccaggcccggtctcatgtggtgtagcggtcgccgcggcatggttagagccccacccttcgc 215
 ||| ||| | | | | | | | | | | | | | | | |
 Db 5368 ccagaccaccacccccacatcaccaacatcctcaccaacctccaccaccacggcatcac 5427
 Qy 216 tcgcaatcccatcaccatgaccctcacgcctggcgcgccgacctctccaagaaagt 275
 | || ||| |||| | || | | | || |||| | | | |
 Db 5428 ccccatccccctcaccctcaaccacacccacaccaacccccaacacctccaccacacct 5487
 Qy 276 cgtgaagac 284
 | | ||
 Db 5488 ccaccacac 5496

RESULT 12
 AAA92301
 ID AAA92301 standard; DNA; 30690 BP.
 XX
 AC AAA92301;
 XX
 DT 10-JAN-2001 (first entry)
 XX
 DE S. avermitilis avermectin aglycon synthase DNA aveAI SEQ ID NO:1.
 XX
 KW Streptomyces avermitilis; avermectin aglycon synthase; biosynthesis;
 KW multifunctional enzyme; polyketide; avermectin; veterinary drug;
 KW agrochemical; ds.
 XX
 OS Streptomyces avermitilis.
 XX

FH Key Location/Qualifiers
 FT CDS 1..11919
 FT /*tag= a
 FT /note= "avermectin aglycon synthase protein"
 FT CDS 11971..30690
 FT /*tag= b
 FT /note= "avermectin aglycon synthase protein"
 XX
 PN WO200050605-A1.
 XX
 PD 31-AUG-2000.
 XX
 PF 23-FEB-2000; 2000WO-JP01041.
 XX
 PR 24-FEB-1999; 99JP-0046961.
 XX
 PA (KITA) KITASATO INST.
 XX
 PI Omura S, Ikeda H;
 XX
 DR WPI; 2000-565458/52..
 DR P-PSDB; AAB23749, AAB23750.
 XX
 PT Avermectin aglycone synthase DNA and proteins encoded by all or part of
 PT it for the production of avermectin and its derivatives for drug and
 PT agrochemical use -
 XX
 PS Claim 2; Page 66-134; 314pp; Japanese.
 XX
 CC The present sequence represents DNA which encodes avermectin aglycon
 CC synthase proteins. Also described are: (1) polypeptides encoded by all
 CC or part of the DNA; (2) expression vectors containing the DNA; (3) host
 CC cells transformed by the vectors; (4) preparation of the polypeptides
 CC by culture of the transformants; (5) preparation of avermectin aglycon
 CC or its derivatives by culture of transformed avermectin-producing
 CC microorganisms; and (6) oligonucleotides of 5-60 bases in length
 CC containing sense or antisense sequences from the avermectin aglycon
 CC synthase DNA. The enzymes are useful for the production of modified
 CC forms of avermectin and of the intermediates in its biosynthesis, for
 CC use as drugs, veterinary drugs and agrochemicals.
 XX
 SQ Sequence 30690 BP; 5356 A; 12454 C; 8617 G; 4263 T; 0 other;

Query Match 8.6%; Score 35.4; DB 21; Length 30690;
 Best Local Similarity 49.2%; Pred. No. 2.2;
 Matches 93; Conservative 0; Mismatches 96; Indels 0; Gaps 0;

Qy 96 cccaacactccaaaccaaccaacttcaaccaaaccaccacaacaatgccttcagtaac 155
 || || |||| |||| ||| || | ||||| | | |||
 Db 4491 cctcaccctccccaccaccaccaacccaccaaacctggctcatcgccatcccogaaac 4550
 Qy 156 ccaggcccggtctcatgtggcgtagcgtagcgccgcatggttagagccccaccoccttcgc 215
 |||| ||| | | | | | | | | | | | ||| | |||
 Db 4551 ccagaccaccacccccacatcaccaacatcctcaccaacctccaccaccacggcatcac 4610
 Qy 216 tcgcaatcccatcaccatgaccacctacgcctggcgcgccgacacctctccaagaaagt 275

Db 4611 ccccatccccctcaccctcaaccacacccacaccaaccccccaacacctccaccacaccct 4670
 Qy 276 cgtgaagac 284
 Db 4671 ccaccacac 4679

RESULT 13

AAX53491/c

ID AAX53491 standard; DNA; 114955 BP.

XX

AC AAX53491;

XX

DT 05-JUL-1999 (first entry)

XX

DE Human adenosine A1 receptor antisense oligonucleotide fragment.

XX

KW Antisense oligonucleotide; multiple target; antisense treatment;

KW impaired respiration; inflammation; lung disease;

KW pulmonary vasoconstriction; inflammation; allergic rhinitis;

KW acute asthma; allergy; asthma; impeded respiration;

KW respiratory distress syndrome; pain; cystic fibrosis;

KW pulmonary hypertension; pulmonary vasoconstriction; emphysema;

KW chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma;

KW colon cancer; breast cancer; lung cancer; pancreatic cancer;

KW hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;

KW prostate cancer; ss.

XX

OS Synthetic.

XX

PN WO9913886-A1.

XX

PD 25-MAR-1999.

XX

PF 17-SEP-1998; 98WO-US19419.

XX

PR 09-JUN-1998; 98US-0093972.

PR 17-SEP-1997; 97US-0059160.

XX

PA (UYEC-) UNIV EAST CAROLINA.

XX

PI Nyce JW;

XX

DR WPI; 1999-229400/19.

XX

PT New antisense oligonucleotides used in treatment of, e.g. pulmonary
 PT vasoconstriction

XX

PS Disclosure; Page 37; 120pp; English.

XX

CC The specification describes antisense oligonucleotides (AAX52869-X55271)
 CC directed against at least 2 mRNAs selected from target genes, coding and
 CC non-coding regions of RNAs corresponding to target genes, gene
 CC initiation codons, genomic flanking regions, intron-exon borders, the
 CC 5'-end, the 3'-end and the juxta-section between coding and non-coding
 CC regions and all segments of RNAs encoding proteins associated with one

CC or more diseases, conditions or mixtures. The antisense oligonucleotides
 CC may be derived from sequences AAX55272-74. These multiple target
 CC oligonucleotides (specifically AAX55180-271) can be used for the
 CC antisense treatment of diseases and conditions. Typical diseases and
 CC conditions are those associated with impaired respiration and
 CC inflammation, including lung diseases, pulmonary vasoconstriction,
 CC inflammation, allergic rhinitis, acute asthma, allergies, asthma, impeded
 CC respiration, respiratory distress syndrome, pain, cystic fibrosis,
 CC pulmonary hypertension, pulmonary vasoconstriction, emphysema, chronic
 CC obstructive pulmonary disease (COPD), and cancers such as leukemias,
 CC lymphomas, carcinomas e.g. colon cancer, breast cancer, lung cancer,
 CC pancreatic cancer, hepatocellular carcinoma, kidney cancer, melanoma,
 CC hepatic metastases, as well as all types of cancers which may metastasize
 CC or have metastasized to the lungs, including breast and prostate cancer.
 XX
 SQ Sequence 114955 BP; 6071 A; 29417 C; 36712 G; 21328 T; 21427 other;

Query Match 8.5%; Score 34.8; DB 20; Length 114955;
 Best Local Similarity 43.5%; Pred. No. 5.5;
 Matches 74; Conservative 7; Mismatches 89; Indels 0; Gaps 0;

Qy 173 ggcgtagcgtcgcccgcgccatggtagagccccaccccttcgctcgcaatcccatcacca 232
 |||| || | |||| : : |||| || | ||| | :
 Db 108267 GGCGCCGCCGCCCGCCNNHNNNSCCVAGGCGAGCCAGGCGCCGCCGCCCGCCCGCCNNHN 108208

Qy 233 tgaccacctcacgcctggcgcgccgacacctccaagaaagtcgtgaagacaagcactg 292
 |||: || ||||| || || : | : || | ||
 Db 108207 NNSCCCVAGGCGAGCCAGGCGCCGCCCGCCCGCCNNHNNNSGCCCVAGGCGAGCCAGGC 108148

Qy 293 tcttcttccccttctatgcaggtatccttgatggccagtcgcagccgcc 342
 | | |||| | : || || |||| || ||||
 Db 108147 GCCGCCGCCCGCCNNHNNNSGGCCCVAGGCGAGCCAGGCGCCGCCGCC 108098

RESULT 14
 AAV22334
 ID AAV22334 standard; DNA; 2634 BP.
 XX
 AC AAV22334;
 XX
 DT 17-AUG-1998 (first entry)
 XX
 DE Microbispora thermorosea pyruvate orthophosphate dikinase gene.
 XX
 KW Pyruvate orthophosphate dikinase; PPDk; pyrophosphoric acid;
 KW assay; ds.
 XX
 OS Microbispora thermorosea strain IFO 14047.
 XX
 PN GB2317892-A.
 XX
 PD 08-APR-1998.
 XX
 PF 02-OCT-1997; 97GB-0021083.
 XX
 PR 03-OCT-1996; 96JP-0281304.

DE Corynebacterium glutamicum MCT protein encoding DNA SEQ ID NO:33.
 XX
 KW Corynebacterium glutamicum; brevibacterium lactofermentum; MCT;
 KW membrane construction and membrane transport protein; petroleum spill;
 KW hydrocarbon degradation; gram positive aerobic bacterium; marker;
 KW identification; microorganism; fine chemical production; transformation;
 KW genome mapping; genetic engineering; ds.
 XX
 OS Corynebacterium glutamicum.
 XX
 PN WO200100805-A2.
 XX
 PD 04-JAN-2001.
 XX
 PF 23-JUN-2000; 2000WO-IB00926.
 XX
 PR 25-JUN-1999; 99US-0141031.
 PR 08-JUL-1999; 99DE-1031454.
 PR 08-JUL-1999; 99DE-1031478.
 PR 08-JUL-1999; 99DE-1031563.
 PR 09-JUL-1999; 99DE-1032122.
 PR 09-JUL-1999; 99DE-1032124.
 PR 09-JUL-1999; 99DE-1032125.
 PR 09-JUL-1999; 99DE-1032128.
 PR 09-JUL-1999; 99DE-1032180.
 PR 09-JUL-1999; 99DE-1032182.
 PR 09-JUL-1999; 99DE-1032190.
 PR 09-JUL-1999; 99DE-1032191.
 PR 09-JUL-1999; 99DE-1032209.
 PR 09-JUL-1999; 99DE-1032212.
 PR 09-JUL-1999; 99DE-1032227.
 PR 09-JUL-1999; 99DE-1032228.
 PR 09-JUL-1999; 99DE-1032229.
 PR 09-JUL-1999; 99DE-1032230.
 PR 14-JUL-1999; 99DE-1032927.
 PR 14-JUL-1999; 99DE-1033005.
 PR 14-JUL-1999; 99DE-1033006.
 PR 27-AUG-1999; 99DE-1040764.
 PR 27-AUG-1999; 99DE-1040765.
 PR 27-AUG-1999; 99DE-1040766.
 PR 27-AUG-1999; 99DE-1040830.
 PR 27-AUG-1999; 99DE-1040831.
 PR 27-AUG-1999; 99DE-1040832.
 PR 27-AUG-1999; 99DE-1040833.
 PR 31-AUG-1999; 99DE-1041378.
 PR 31-AUG-1999; 99DE-1041379.
 PR 31-AUG-1999; 99DE-1041395.
 PR 03-SEP-1999; 99DE-1042077.
 PR 03-SEP-1999; 99DE-1042078.
 PR 03-SEP-1999; 99DE-1042079.
 PR 03-SEP-1999; 99DE-1042088.
 XX
 PA (BADI) BASF AG.
 XX
 PI Pompejus M, Kroeger B, Schroeder H, Zelder O, Haberhauer G;
 XX
 DR WPI; 2001-071486/08.

DR P-PSDB; AAB76526.
 XX
 PT Corynebacterium glutamicum nucleic acids encoding membrane construction
 PT and membrane transport proteins or their portions, useful for typing or
 PT identifying C. glutamicum or related bacteria, and as markers for
 PT transformation -
 XX
 PS Claim 3; Page 185-186; 1119pp; English.
 XX
 CC AAF67743 to AAF68080 encode the Corynebacterium glutamicum membrane
 CC construction and membrane transport (MCT) proteins given in AAB76510 to
 CC AAB76847. The MCT nucleic acids and proteins are useful in the
 CC identification of microorganisms which can be used to produce fine
 CC chemicals, for modulating fine chemical production in C. glutamicum or
 CC related bacteria (e.g. Brevibacterium lactofermentum), the typing or
 CC identification of C. glutamicum or related bacteria, as reference points
 CC for mapping C. glutamicum genome, and as markers for transformation.
 CC AAF68082 and AAF68082 represent sequencing primers which are used in an
 CC example from the present invention.
 XX
 SQ Sequence 913 BP; 233 A; 321 C; 206 G; 153 T; 0 other;

Query Match 8.3%; Score 34; DB 22; Length 913;
 Best Local Similarity 48.9%; Pred. No. 1.5;
 Matches 91; Conservative 0; Mismatches 95; Indels 0; Gaps 0;

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 Db 638 ctctccggcgcgagcccccaacaccggttccttttgaaaccctgaccagcgagcaatgggc 697
 Qy 178 agcgtcgccccgcgcatggttagagccccacccttcgctcgcaatcccatcaccatgacc 237
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 Db 698 ggcgacggcgacgacgtagtttcagaaccaccgtgaccaaagaatccgctcgcgctgatc 757
 Qy 238 cctcacgcctggcgcgccgacgtctccaagaaagtcgtgaagacaagcactgtcttc 297
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 Qy 298 ttcccc 303
 | | | |
 Db 818 ttctcc 823

Search completed: February 7, 2002, 11:00:37
 Job time: 5023 sec

GenCore version 4.5
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OM nucleic - nucleic search, using sw model

Run on: February 7, 2002, 11:12:24 ; Search time 172.96 Seconds
 (without alignments)
 538.173 Million cell updates/sec

Title: US-09-394-745-6603
 Perfect score: 411
 Sequence: 1 agcaaaagcatagagatcca.....aggagaagaggaagggaccg 411

Scoring table: IDENTITY_NUC
 Gapop 10.0 , Gapext 1.0

Searched: 351203 seqs, 113238999 residues

Total number of hits satisfying chosen parameters: 702406

Minimum DB seq length: 0
 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
 Maximum Match 100%
 Listing first 45 summaries

Database : Issued_Patents_NA:*
 1: /cgn2_6/ptodata/2/ina/5A_COMB.seq:*
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 4: /cgn2_6/ptodata/2/ina/6B_COMB.seq:*
 5: /cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
 6: /cgn2_6/ptodata/2/ina/backfiles1.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result	%						Description
	No.	Score	Match	Length	DB	ID	
c	1	35	8.5	289	4	US-09-007-005-17	Sequence 17, Appl
c	2	35	8.5	289	4	US-09-244-796-17	Sequence 17, Appl
	3	35	8.5	7218	1	US-08-232-463-14	Sequence 14, Appl
	4	34.2	8.3	2634	3	US-08-941-936-1	Sequence 1, Appli
	5	33	8.0	1280	4	US-09-060-756-4	Sequence 4, Appli
	6	32.8	8.0	925	3	US-08-858-003-1	Sequence 1, Appli
	7	32.8	8.0	925	3	US-09-078-166-1	Sequence 1, Appli
	8	32.8	8.0	925	4	US-08-997-467-1	Sequence 1, Appli
	9	32.6	7.9	49377	1	US-08-764-233A-1	Sequence 1, Appli
c	10	31.4	7.6	490	4	US-08-998-416-882	Sequence 882, App
c	11	31.2	7.6	30001	1	US-08-125-468-1	Sequence 1, Appli
c	12	31.2	7.6	30001	2	US-08-474-933-1	Sequence 1, Appli
	13	30.8	7.5	11495	4	US-09-056-105-9	Sequence 9, Appli
	14	30.6	7.4	35081	2	US-08-752-760A-1	Sequence 1, Appli
	15	30.6	7.4	4403765	4	US-09-103-840A-2	Sequence 2, Appli
	16	30.4	7.4	696	4	US-09-378-255-7	Sequence 7, Appli
	17	30.4	7.4	696	4	US-09-715-336-7	Sequence 7, Appli
	18	30.4	7.4	2669	4	US-09-141-212-9	Sequence 9, Appli
	19	30.4	7.4	2669	4	US-09-561-138-9	Sequence 9, Appli
	20	30.4	7.4	3255	2	US-08-916-917-11	Sequence 11, Appl
	21	30.4	7.4	3255	3	US-09-225-170-11	Sequence 11, Appl

22	30.4	7.4	3630	4	US-09-378-255-5	Sequence 5, Appli
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24	30.4	7.4	3630	4	US-09-141-212-3	Sequence 3, Appli
25	30.4	7.4	3630	4	US-09-552-351-3	Sequence 3, Appli
26	30.4	7.4	3630	4	US-09-251-372-5	Sequence 5, Appli
27	30.4	7.4	3630	4	US-09-561-138-1	Sequence 1, Appli
28	30.4	7.4	3630	4	US-09-561-138-3	Sequence 3, Appli
29	30.4	7.4	3630	4	US-09-715-336-5	Sequence 5, Appli
30	30.2	7.3	152331	3	US-09-128-155-16	Sequence 16, Appl
31	30	7.3	714	4	US-09-105-537-17	Sequence 17, Appl
32	30	7.3	13613	4	US-09-105-537-3	Sequence 3, Appli
33	30	7.3	38506	3	US-09-320-878-19	Sequence 19, Appl
c 34	29.8	7.3	4177	3	US-09-023-082A-23	Sequence 23, Appl
35	29.8	7.3	4411529	4	US-09-103-840A-1	Sequence 1, Appli
36	29.6	7.2	35524	3	US-08-923-137-1	Sequence 1, Appli
37	29.4	7.2	815	4	US-08-818-112-139	Sequence 139, App
38	29.4	7.2	28958	1	US-08-258-261B-6	Sequence 6, Appli
39	29.4	7.2	28958	1	US-08-456-837-6	Sequence 6, Appli
40	29.4	7.2	28958	1	US-08-457-342-6	Sequence 6, Appli
41	29.4	7.2	28958	1	US-08-457-646A-6	Sequence 6, Appli
42	29.4	7.2	28958	1	US-08-458-076A-6	Sequence 6, Appli
43	29.4	7.2	28958	1	US-08-764-233A-4	Sequence 4, Appli
44	29.4	7.2	28958	1	US-08-457-335A-6	Sequence 6, Appli
45	29.4	7.2	28958	1	US-08-729-214-6	Sequence 6, Appli

ALIGNMENTS

```

RESULT 1
US-09-007-005-17/c
; Sequence 17, Application US/09007005B
; Patent No. 6258558
; GENERAL INFORMATION:
; APPLICANT: Szostak, Jack W.
; APPLICANT: Roberts, Richard W.
; APPLICANT: Liu, Rihe
; TITLE OF INVENTION: SELECTION OF PROTEINS USING RNA-PROTEIN
; TITLE OF INVENTION: FUSIONS
; FILE REFERENCE: 00786/350003
; CURRENT APPLICATION NUMBER: US/09/007,005B
; CURRENT FILING DATE: 1998-01-14
; EARLIER APPLICATION NUMBER: 60/035,963
; EARLIER FILING DATE: 1997-01-27
; EARLIER APPLICATION NUMBER: 60/064,491
; EARLIER FILING DATE: 1997-11-06
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 17
; LENGTH: 289
; TYPE: RNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Translation template
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (1)...(289)

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; OTHER INFORMATION: n = A,T,C or G
US-09-007-005-17

Query Match 8.5%; Score 35; DB 4; Length 289;
Best Local Similarity 7.9%; Pred. No. 0.04;
Matches 20; Conservative 102; Mismatches 131; Indels 0; Gaps 0;

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Qy      91 cccatcccaacactccaaaccaaccaacacttcaaccaaaccaccacacaacaatgccttca 150
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Db      253 YCYAYAYGYAYGYTYTYAYCYGYCYAYGYCYTYGYSYNYNSYNYNSYNYNSYNYNS 194

Qy     151 gtaacccaggcccgctctcatgtggcgtagcgctcgcccgcgccatggttagagccccacccc 210
          : : : : : : : : : : : : : : : : : : : :
Db     193 YNYNSYNYNSYNYNSYNYNSYNYNSYNYNSYNYNSYNYNSYNYNSYNYNSYNYNS 134

Qy     211 ttcgctcgcaatcccatcaccatgacccctcacgcctggcgcgccgacctctccaag 270
          : : : : : : : : : : : : : : : : : : : :
Db     133 YNYNSYNYNSYNYNSYNYNSYNYNSYNYNSYNYNSYNYNSYNYNSYNYNSYNYNS 74

Qy     271 aaagtcgtgaagacaagcactgtcttcttcccttctatgcaggtatccttggatggcca 330
          : : : : | : : : |: : |: : |: : |: : |: : :
Db       73 YNYNSYNYNSYNYNYCYAYTYTYGYTYAYAYTYTYGYTYAYAYAYTYAYGYTYAYAYT 14

Qy     331 gtcgcagccgcct 343
          |:|: |: |:
Db      13 YTYGYTYCYCYCY 1
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RESULT 2
US-09-244-796-17/c
; Sequence 17, Application US/09244796
; Patent No. 6281344
; GENERAL INFORMATION:
; APPLICANT: Szostak, Jack W.
; APPLICANT: Roberts, Richard W.
; APPLICANT: Liu, Rihe
; TITLE OF INVENTION: SELECTION OF PROTEINS USING RNA-PROTEIN
; TITLE OF INVENTION: FUSIONS
; FILE REFERENCE: 00786/350007
; CURRENT APPLICATION NUMBER: US/09/244,796
; CURRENT FILING DATE: 1999-02-05
; EARLIER APPLICATION NUMBER: 60/035,963
; EARLIER FILING DATE: 1997-01-27
; EARLIER APPLICATION NUMBER: 60/064,491
; EARLIER FILING DATE: 1997-11-06
; EARLIER APPLICATION NUMBER: 09/007,005
; EARLIER FILING DATE: 1998-01-14
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 17
; LENGTH: 289
; TYPE: RNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Translation template
; FEATURE:


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; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/07/935,313
; FILING DATE:
; APPLICATION NUMBER: EP 91 114 300.6
; FILING DATE: 26-AUG-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: BENT, Stephen A.
; REGISTRATION NUMBER: 29,768
; REFERENCE/DOCKET NUMBER: 30472/114 IMMU
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (703)836-9300
; TELEFAX: (703)683-4109
; TELEX: 899149
; INFORMATION FOR SEQ ID NO: 14:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 7218 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; IMMEDIATE SOURCE:
; CLONE: pTZgpt-Fls
US-08-232-463-14

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Query Match          8.5%; Score 35; DB 1; Length 7218;
Best Local Similarity 3.1%; Pred. No. 0.2;
Matches 11; Conservative 192; Mismatches 152; Indels 0; Gaps 0;

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Qy   17 tccatcttctctgtcaatcaattacacaacaagagcattctagatttgagttcatccta 76
      ::: :::::::::: :: :: :: :: :: :: :: :: :: :: :: :: :: ::
Db  1102 YYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYY 1161

Qy   77 gcgataccaatacacccatcccaacactccaaaccaaccaacacttcaaccaaacacca 136
      : : : : : : : : : : : : : : : : : : : : : : : : : :
Db  1162 YYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYY 1221

Qy  137 caacaatgccttcagtaaacccaggcccgctctcatgtggcgtagcgctcgccgcggcatgg 196
      : : : : : : : : : : : : : : : : : : : : : : : : : :
Db  1222 YYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYY 1281

Qy  197 tagagccccacccttcgctcgcaatcccatcaccatgaccctcagcgctggcgcgccg 256
      : : : : : : : : : : : : : : : : : : : : : : : : : :
Db  1282 YYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYY 1341

Qy  257 ccgacctctccaagaaagtcgtgaagacaagcactgtcttcttccccttctatgcaggta 316
      :: :::::::::: :: : : : : : : : : : : : : : : : : : :
Db  1342 YYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYY 1401

Qy  317 tccttggatggccagtcgcagccgcctggtggttcaacggaaacatgtgactctt 371
      :::: : : : : : : : : : : : : : : : : : : : : : : : :
Db  1402 YYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYGTACCAAATTCTTCTATCTCTT 1456

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```

RESULT 4
US-08-941-936-1
; Sequence 1, Application US/08941936
; Patent No. 6054305

```

```

; GENERAL INFORMATION:
;   APPLICANT:  Tatsumi, Hiroki
;   APPLICANT:  Eisaki, Naoki
;   APPLICANT:  Horiuchi, Tatsuo
;   APPLICANT:  Nagahara, Ayumu
;   TITLE OF INVENTION:  Pyruvate Orthophosphate Dikinase Gene,
;   TITLE OF INVENTION:  Recombinant DNA, and Process For Producing Pyruvate
;   TITLE OF INVENTION:  Orthophosphate Dikinase
;   NUMBER OF SEQUENCES:  8
;   CORRESPONDENCE ADDRESS:
;       ADDRESSEE:  MEDLEN & CARROLL, LLP
;       STREET:    220 Montgomery Street, Suite 2200
;       CITY:      San Francisco
;       STATE:     CA
;       COUNTRY:   US
;       ZIP:       94104
;   COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Floppy disk
;       COMPUTER:     IBM PC compatible
;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:     PatentIn Release #1.0, Version #1.30
;   CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/941,936
;       FILING DATE:       01-OCT-1997
;       CLASSIFICATION:    435
;   ATTORNEY/AGENT INFORMATION:
;       NAME:  Carroll, Peter G.
;       REGISTRATION NUMBER:  32,837
;       REFERENCE/DOCKET NUMBER:  HIRAKI-03009
;   TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  415-705-8410
;       TELEFAX:    415-397-8338
;   INFORMATION FOR SEQ ID NO:  1:
;       SEQUENCE CHARACTERISTICS:
;           LENGTH:  2634 base pairs
;           TYPE:    nucleic acid
;           STRANDEDNESS:  double
;           TOPOLOGY:  linear
;       MOLECULE TYPE:  DNA (genomic)
;       ORIGINAL SOURCE:
;           ORGANISM:  Microbispora thermorosea
;           STRAIN:    IFO 14047
;       FEATURE:
;           NAME/KEY:  CDS
;           LOCATION:  1..2634
US-08-941-936-1

```

```

Query Match          8.3%;  Score 34.2;  DB 3;  Length 2634;
Best Local Similarity 55.5%;  Pred. No. 0.22;
Matches 66;  Conservative 0;  Mismatches 53;  Indels 0;  Gaps 0;

```

```

Qy  180  cgctgccccgcggcatggtagagccccacccttcgctcgcaatcccatcaccatgacccc 239
      ||| ||||| ||||| || || | ||| || | || |||
Db  1353  CGTGGCCCGCGGCATGGGCAAGACCTGCGTGTGCGGGGCCGAGGAAGTGAAGTGGACCC 1412

Qy  240  tcacgcctggcgcgccgacacctctccaagaaagtcgtgaagacaagcactgtcttct 298

```

||||| | ||| | ||| | | | || ||||| | | |||
Db 1413 GCACGCCCGCGCTTCACCGCGCCCGGCGGGATCGTCGTGAACGAGGGCGAGGTGATCT 1471

RESULT 5
US-09-060-756-4
; Sequence 4, Application US/09060756
; Patent No. 6183957
; GENERAL INFORMATION:
; APPLICANT: Cole, Stewart
; APPLICANT: Buchrieser-Brosch, Roland
; APPLICANT: Gordon, Stephen
; APPLICANT: Billault, Alain
; TITLE OF INVENTION: METHOD FOR ISOLATING A POLYNUCLEOTIDE OF INTEREST FROM
; TITLE OF INVENTION: THE GENOME OF A MYCOBACTERIUM USING A BAC-BASED DNA
; TITLE OF INVENTION: LIBRARY APPLICATION TO THE DETECTION OF MYCOBACTERIA
; FILE REFERENCE: 3495-0169
; CURRENT APPLICATION NUMBER: US/09/060,756
; CURRENT FILING DATE: 1998-04-16
; NUMBER OF SEQ ID NOS: 743
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 1280
; TYPE: DNA
; ORGANISM: Mycobacterium tuberculosis
US-09-060-756-4

Query Match 8.0%; Score 33; DB 4; Length 1280;
Best Local Similarity 47.8%; Pred. No. 0.38;
Matches 96; Conservative 0; Mismatches 105; Indels 0; Gaps 0;

Qy 160 gcccgctctcatgtggcgtagcgctgccccgcgccatggtagagccccacccttcgctcgc 219
| | ||| | ||| ||||| || | |||| | | | | |||| |
Db 787 ggcgggtcagttatggggtagcggcgccgcgccgctcgaaggcggcgagccttaagcgtc 846

Qy 220 aatcccatcaccatgaccctcacgcctggcgcgccgacctctccaagaaagtcgtg 279
| | | | | || | | || | | |||| | | | | | |
Db 847 ggcgacaccggcgggggcggtggcgctggcgccgagcgccgggctgatcgccaccggcgcc 906

Qy 280 aagacaagcactgtcttcttcccttctatgcaggtatccttgatggccagtcgcagcc 339
|| ||| | | | | | | | | | | | | | | | | |
Db 907 aacggcggaacggcgccaccggcgccaacggcgagccccggaaccggcgccggcgcc 966

Qy 340 gcctgggtggttcaacggaaac 360
| | | | | | ||||
Db 967 gggttgctgctgggccaac 987

RESULT 6
US-08-858-003-1
; Sequence 1, Application US/08858003
; Patent No. 6060234
; GENERAL INFORMATION:
; APPLICANT: Katz, Leonard
; APPLICANT: Stassi, Diane L.
; APPLICANT: Summers Jr., Richard G.

```

; APPLICANT: Ruan, Xiaoan
; APPLICANT: Pereda-Lopez, Ana
; APPLICANT: Kakavas, Stephan J.
; TITLE OF INVENTION: NOVEL POLYKETIDE DERIVATIVES
; TITLE OF INVENTION: AND RECOMBINANT METHODS FOR MAKING SAME
; NUMBER OF SEQUENCES: 34
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Abbott Laboratories
; STREET: 100 Abbott Park Rd.
; CITY: Abbott Park
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60064-3500
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSEQ Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/858,003
; FILING DATE: 16-MAY-1979
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER:
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Dianne Casuto
; REGISTRATION NUMBER: P-40,943
; REFERENCE/DOCKET NUMBER: 4952.US.P2
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (847)-938-3137
; TELEFAX: (847)-938-2623
; TELEX:
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 925 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: linear
US-08-858-003-1

```

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Query Match          8.0%; Score 32.8; DB 3; Length 925;
Best Local Similarity 49.4%; Pred. No. 0.37;
Matches 85; Conservative 0; Mismatches 87; Indels 0; Gaps 0;

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Qy   96 cccaacactccaaaccaaccaactttcaaccaaaccaccacaacaatgccttcagtaac 155
      || || ||||| || ||| || |||| ||||| || || ||
Db   408 CCACACCCTCCAACCCACCTCGACAACCACCACGACACCATCTCCATCGCCGCCATCAA 467

Qy   156 ccaggcccggtctcatgtggcgtagcgtagcgccgcggcatggtagagccccacccttcgc 215
      | ||| || || | ||||| || | || || || ||
Db   468 CGGCCCCCAGCCACCGTCTCTCCGGCGACCGCACCACCCTCCACCACATCGCCACCCA 527

Qy   216 tcgcaatcccatcaccatgaccctcagcctggcgcgccgacgtctcc 267
      | ||| ||| || |||| | | | || ||| |||
Db   528 ACTCAACACCAAACCTTCACCACCACCCTCAACACCCTACCCACCACCCC 579

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RESULT 7
 US-09-078-166-1
 ; Sequence 1, Application US/09078166
 ; Patent No. 6063561
 ; GENERAL INFORMATION:
 ; APPLICANT: Katz, Leonard
 ; APPLICANT: Stassi, Diane L.
 ; APPLICANT: Summers Jr., Richard G.
 ; APPLICANT: Ruan, Xiaoan
 ; APPLICANT: Pereda-Lopez, Ana
 ; APPLICANT: Kakavas, Stephan J.
 ; TITLE OF INVENTION: NOVEL POLYKETIDE DERIVATIVES
 ; TITLE OF INVENTION: AND RECOMBINANT METHODS FOR MAKING SAME
 ; NUMBER OF SEQUENCES: 44
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Abbott Laboratories
 ; STREET: 100 Abbott Park Rd.
 ; CITY: Abbott Park
 ; STATE: Illinois
 ; COUNTRY: USA
 ; ZIP: 60064-3500
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Diskette
 ; COMPUTER: IBM Compatible
 ; OPERATING SYSTEM: DOS
 ; SOFTWARE: FastSEQ Version 2.0
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/09/078,166
 ; FILING DATE: 16-MAY-1979
 ; CLASSIFICATION:
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER:
 ; FILING DATE:
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Dianne Casuto
 ; REGISTRATION NUMBER: P-40,943
 ; REFERENCE/DOCKET NUMBER: 4952.US.P2
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (847)-938-3137
 ; TELEFAX: (847)-938-2623
 ; TELEX:
 ; INFORMATION FOR SEQ ID NO: 1:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 925 base pairs
 ; TYPE: nucleic acid
 ; STRANDEDNESS: double
 ; TOPOLOGY: linear
 US-09-078-166-1

Query Match 8.0%; Score 32.8; DB 3; Length 925;
 Best Local Similarity 49.4%; Pred. No. 0.37;
 Matches 85; Conservative 0; Mismatches 87; Indels 0; Gaps 0;

Qy 96 cccaacactccaaaccaaccaacacttcaaccaaacaccaccacaacaatgccttcagtaac 155


```

      || || ||||| || ||| || | |||| |||| | || | | |
Db    408 CCACACCCTCCAACCCACCTCGACAACCACCACGACACCATCTCCATCGCCGCCATCAA 467

Qy    156 ccaggcccggtctcatgtggcgtagcgtcgcccgcggcatggtagagccccacccttcgc 215
      | ||| || | || |||| || | || | || |
Db    468 CGGCCCCACGCCACCGTCTCTCCGGCGACCGCACCACCCTCCACCACATCGCCACCCA 527

Qy    216 tcgcaatcccatcaccatgaccctcacgcctggcgcgccgacgtctcc 267
      | ||| ||| || | || | | | | || || || |
Db    528 ACTCAACACCAAACCTTCACCACCACCCTCAACACCCTCACCCACCACCCC 579

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RESULT 8

US-08-997-467-1

; Sequence 1, Application US/08997467

; Patent No. 6200813

; GENERAL INFORMATION:

; APPLICANT: Katz, Leonard

; APPLICANT: Stassi, Diane L.

; APPLICANT: Summers Jr., Richard G.

; APPLICANT: Ruan, Xiaoan

; APPLICANT: Pereda-Lopez, Ana

; APPLICANT: Kakavas, Stephan J.

; TITLE OF INVENTION: NOVEL POLYKETIDE DERIVATIVES

; TITLE OF INVENTION: AND RECOMBINANT METHODS FOR MAKING SAME

; NUMBER OF SEQUENCES: 34

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Abbott Laboratories

; STREET: 100 Abbott Park Rd.

; CITY: Abbott Park

; STATE: Illinois

; COUNTRY: USA

; ZIP: 60064-3500

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Diskette

; COMPUTER: IBM Compatible

; OPERATING SYSTEM: DOS

; SOFTWARE: FastSEQ Version 2.0

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/997,467

; FILING DATE:

; CLASSIFICATION:

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 08/858,003

; FILING DATE: 16-MAY-1997

; ATTORNEY/AGENT INFORMATION:

; NAME: Dianne Casuto

; REGISTRATION NUMBER: P-40,943

; REFERENCE/DOCKET NUMBER: 4952.US.P2

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: (847)-938-3137

; TELEFAX: (847)-938-2623

; TELEX:

; INFORMATION FOR SEQ ID NO: 1:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 925 base pairs

; TYPE: nucleic acid

; STRANDEDNESS: double
; TOPOLOGY: linear
US-08-997-467-1

Query Match 8.0%; Score 32.8; DB 4; Length 925;
Best Local Similarity 49.4%; Pred. No. 0.37;
Matches 85; Conservative 0; Mismatches 87; Indels 0; Gaps 0;

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Qy 96 cccaacactccaaaccaacacacttcaaccaaaccaccacaacaatgccttcagtaac 155
    || || ||||| || ||| || | |||| ||||| || | | | |
Db 408 CCACACCCTCCAACCCACCTCGACAACCACCACGACACCATCTCCATCGCGCCATCAA 467

Qy 156 ccaggccccgtctcatgtggcgtagcgctcgcccgcgcatggtagagccccacccttcgc 215
    | ||| || || | || ||||| || | | | | |
Db 468 CGGCCCCCAGGCCACCGTCTCTCCGGCGACCGCACCCCTCCACCACATCGCCACCCA 527

Qy 216 tcgcaatcccatcaccatgaccctcagcgctggcgcgccgacgtctcc 267
    | ||| ||| || | ||| | | | | | | | |
Db 528 ACTCAACACCAAACCTTCACCACCACCCTCAACACCCTCACCCACCACCCC 579
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RESULT 9

US-08-764-233A-1

; Sequence 1, Application US/08764233A

; Patent No. 5716849

; GENERAL INFORMATION:

; APPLICANT: Ligon, James M.

; APPLICANT: Schupp, Thomas

; APPLICANT: Beck, James J.

; APPLICANT: Hill, Dwight S.

; APPLICANT: Neff, Snezana

; APPLICANT: Ryals, John A.

; TITLE OF INVENTION: Genes For The Biosynthesis Of Soraphen

; NUMBER OF SEQUENCES: 10

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Ciba-Geigy Corporation

; STREET: 520 White Plains Road, P.O. Box 2005

; CITY: Tarrytown

; STATE: NY

; COUNTRY: USA

; ZIP: 10591

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/764,233A

; FILING DATE:

; CLASSIFICATION: 435

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/729,214

; FILING DATE: 09-OCT-1996

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/258,261

; FILING DATE: 08-JUN-1994

```

; ATTORNEY/AGENT INFORMATION:
;   NAME: Meigs, J. Timothy
;   REGISTRATION NUMBER: 38,241
;   REFERENCE/DOCKET NUMBER: 1506/CIP6
; TELECOMMUNICATION INFORMATION:
;   TELEPHONE: (919) 541-8587
;   TELEFAX: (919) 541-8689
; INFORMATION FOR SEQ ID NO: 1:
;   SEQUENCE CHARACTERISTICS:
;     LENGTH: 49377 base pairs
;     TYPE: nucleic acid
;     STRANDEDNESS: single
;     TOPOLOGY: linear
;   MOLECULE TYPE: DNA (genomic)
;   ORIGINAL SOURCE:
;     ORGANISM: Sorangium cellulosum
;   IMMEDIATE SOURCE:
;     CLONE: p98/1, pJL3, and pVKM15
;   FEATURE:
;     NAME/KEY: misc_feature
;     LOCATION: 383..760
;     OTHER INFORMATION: /product= "SorR"
;     OTHER INFORMATION: /note= "This gene encodes a protein that is highly
homologous t
;     OTHER INFORMATION: the reductase domains of type I PKSs such as eryA
from
;     OTHER INFORMATION: Saccharopolyspora erythraea."
;   FEATURE:
;     NAME/KEY: misc_feature
;     LOCATION: 927..19874
;     OTHER INFORMATION: /product= "SorA"
;     OTHER INFORMATION: /note= "Gene product is highly homologous to type I
PKSs that
;     OTHER INFORMATION: are known to be involved in the synthesis of
polyketide
;     OTHER INFORMATION: compounds."
;   FEATURE:
;     NAME/KEY: misc_feature
;     LOCATION: 942..7115
;     OTHER INFORMATION: /product= "Module 1 of SorA"
;   FEATURE:
;     NAME/KEY: misc_feature
;     LOCATION: 7203..12884
;     OTHER INFORMATION: /product= "Module 2 of SorA"
;   FEATURE:
;     NAME/KEY: misc_feature
;     LOCATION: 13455..19616
;     OTHER INFORMATION: /product= "Module 3 of SorA"
;   FEATURE:
;     NAME/KEY: misc_feature
;     LOCATION: 19871..46318
;     OTHER INFORMATION: /product= "SorB"
;     OTHER INFORMATION: /note= "Gene product is highly homologous to type I
PKS genes."
;   FEATURE:
;     NAME/KEY: misc_feature
;     LOCATION: 19870..24556

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;   OTHER INFORMATION:  /product= "Module 1 of SorB"
;   FEATURE:
;   NAME/KEY:  misc_feature
;   LOCATION:  24638..30820
;   OTHER INFORMATION:  /product= "Module 2 of SorB"
;   FEATURE:
;   NAME/KEY:  misc_feature
;   LOCATION:  30881..35446
;   OTHER INFORMATION:  /product= "Module 3 of SorB"
;   FEATURE:
;   NAME/KEY:  misc_feature
;   LOCATION:  35528..40114
;   OTHER INFORMATION:  /product= "Module 4 of SorB"
;   FEATURE:
;   NAME/KEY:  misc_feature
;   LOCATION:  40190..46318
;   OTHER INFORMATION:  /product= "Module 5 of SorB"
;   FEATURE:
;   NAME/KEY:  misc_feature
;   LOCATION:  46851..47891
;   OTHER INFORMATION:  /product= "SorM"
;   OTHER INFORMATION:  /note= "The protein encoded by the sorM gene is
highly
;   OTHER INFORMATION:  homologous to the methyltransferase from Streptomyces
;   OTHER INFORMATION:  hygrosopicus that is involved in the synthesis of
the
;   OTHER INFORMATION:  polyketide rappamycin."
US-08-764-233A-1

```

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Query Match          7.9%;  Score 32.6;  DB 1;  Length 49377;
Best Local Similarity 46.3%;  Pred. No. 3.2;
Matches 107;  Conservative 0;  Mismatches 124;  Indels 0;  Gaps 0;

```

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Qy   101 cactccaaaccaaccaacacttcaaccaaaccaccacaacaatgccttcagtaaccagg 160
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Db  12535 CCCTCCAAGCCCTCTTGGACTCCATCCCAGCGCTCACCCGCTACCGCCGTCGTCCACG 12594

Qy   161 cccgtctcatgtggcgtagcgctcgcccgggcatggtagagccccacccttcgctcgca 220
      || | | | || || | || || | || || || || || || ||
Db  12595 CCGCGGGCGCCCTCGACGACGGCCTGCTCGGCGCCATGAGCCCCGAGCGCATCGACCGCG 12654

Qy   221 atcccatcaccatgacccctcaogcctggcgcgccgacacctctccaagaaagtcgtga 280
      | || | | | | || || || | || || || | | | |
Db  12655 TCTTTGCCCCAAGCTCGATGCTGCTTGGCACTTGTCATGAGCTACCCAAGACAAGCCCC 12714

Qy   281 agacaagcactgtcttcttcccttctatgcaggtatccttggtggccag 331
      | | | || || || | | | || || || || || || || ||
Db  12715 TCGCCGCCTTCGTCTCTTCTCGTCCGCTGCTGGCGTCCTTGGTAGTCCAG 12765

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RESULT 10
US-08-998-416-882/c
; Sequence 882, Application US/08998416
; Patent No. 6239264
; GENERAL INFORMATION:
; APPLICANT: Philippsen, Peter

```

```

; APPLICANT: Pohlmann, Rainer
; APPLICANT: Steiner, Sabine
; APPLICANT: Mohr, Christine
; APPLICANT: Wendland, Jurgen
; APPLICANT: Knechtle, Philipp
; APPLICANT: Rebischung, Corinne
; TITLE OF INVENTION: GENOMIC DNA SEQUENCES OF ASHBYA GOSSYPII
; TITLE OF INVENTION: AND USES THEREOF
; NUMBER OF SEQUENCES: 1152
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: No. 6239264artis Corporation
; STREET: 3054 Cornwallis Road
; CITY: Research Triangle Park
; STATE: No. 6239264th Carolina
; COUNTRY: USA
; ZIP: 27709
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/998,416
; FILING DATE: 24-DEC-1997
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: CH 0016/97
; FILING DATE: 31-DEC-1996
; ATTORNEY/AGENT INFORMATION:
; NAME: Meigs, J. Timothy
; REGISTRATION NUMBER: 38,241
; REFERENCE/DOCKET NUMBER: PF/5-30306/A/CGC1976
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 919-541-8587
; TELEFAX: 919-541-8689
; INFORMATION FOR SEQ ID NO: 882:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 490 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
; ORIGINAL SOURCE:
; ORGANISM: PAG1552UP
US-08-998-416-882

```

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Query Match          7.6%; Score 31.4; DB 4; Length 490;
Best Local Similarity 48.5%; Pred. No. 0.77;
Matches 83; Conservative 1; Mismatches 87; Indels 0; Gaps 0;

```

```

Qy 209 ccttgcgtcgcaatcccatcaccatgacccctcacgcctggcgcgccgcccacctctcca 268
    || || ||| | || |||| ||| ||||| ||| ||| | ||
Db 356 CCGTCATCCGCGACGCCGTCACCTACACCGAGCACGCCAAGCGCAAGACCGTCACCTCGC 297

Qy 269 agaaagtcgtgaagacaagcactgtcttcttccccttctatgcaggtatccttgggatggc 328
    | ||||| | | || | || | | || || || ||

```



```

; REGISTRATION NUMBER: 31,145
; REFERENCE/DOCKET NUMBER: 31,255-02
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201)831-3241
; TELEFAX: (201)831-3305
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 30001 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
US-08-474-933-1

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Query Match 7.6%; Score 31.2; DB 2; Length 30001;
Best Local Similarity 45.0%; Pred. No. 7.1;
Matches 117; Conservative 0; Mismatches 143; Indels 0; Gaps 0;

Qy	78	cgataccaatacaccccatcccaaacactccaaaccaaccaacacttcaaccaaaccaccac	137
Db	8059	CGTGATCGACACCAACCTCACCAGCGTCTTCCGCGTCACCCGCGAGGTCCTCACCACCGG	8000
Qy	138	aacaatgccttcagtaacccaggcccgctctcatgtggcgtagcgctcgcccgcgcatggt	197
Db	7999	CGGCATGGAGGCGGCCGGGCACGGGCGGATCATCAGCGTCGCCCTCCACCGGCGGCAAGCA	7940
Qy	198	agagccccaccccttcgctcgcaatcccatcaccatgacccctcacgcctggcgcgccgc	257
Db	7939	GGGTGTCCCGCTGGGCGCCCCCTACTCGGCCCTCCAAGGCCGGCGTCATCGGCTTCACCAA	7880
Qy	258	cgacctctccaagaaagtcgtgaagacaagcactgtcttcttccccttctatgcaggtat	317
Db	7879	GGCGCTGGCCAAGGAACCTCGCCACACCGGCACCACGGTCAACGCCGTCTGCCCCGGGCTA	7820
Qy	318	ccttggatggccagtcgcag	337
Db	7819	CGTCGAGACGCCGATGGCCG	7800

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RESULT 13
US-09-056-105-9
; Sequence 9, Application US/09056105
; Patent No. 6287569
; GENERAL INFORMATION:
; APPLICANT: KIPPS, THOMAS J.
; APPLICANT: WU, YUNQI
; TITLE OF INVENTION: VACCINES WITH ENHANCED INTRACELLULAR
; TITLE OF INVENTION: PROCESSING
; FILE REFERENCE: 233/221
; CURRENT APPLICATION NUMBER: US/09/056,105
; CURRENT FILING DATE: 1998-04-06
; EARLIER APPLICATION NUMBER: 60/043,467
; EARLIER FILING DATE: 1997-04-10
; NUMBER OF SEQ ID NOS: 35
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 9

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; LENGTH: 11495
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-056-105-9

Query Match 7.5%; Score 30.8; DB 4; Length 11495;
Best Local Similarity 49.4%; Pred. No. 5.9;
Matches 80; Conservative 0; Mismatches 82; Indels 0; Gaps 0;

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Qy      72  tcctagcgataccaatacacccatcccaacactccaaaccaaccaacacttcaaccaaac 131
          |||  |  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||
Db      604  tcccttccacactcctaaccaatccacaccctcatcccctaccagcaccccatcctccc 663

Qy     132  caccacaacaatgccttcagtaacccaggcccgtctcatgtggcgtagcgtcgcccgcg 191
          ||  |  |  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||
Db     664  caaccccgtagccaccctcatacccccatccccaattcaaccccgccaccctcatcccca 723

Qy     192  catggtagagccccaccccttcgctcgcaatcccatcaccat 233
          |  |  |  ||  ||  ||  ||  ||  ||  ||  ||  ||  ||
Db     724  ccccacacctgcacccccaccccccaacaccatacccccat 765
```

RESULT 14

US-08-752-760A-1

; Sequence 1, Application US/08752760A

; Patent No. 5877011

; GENERAL INFORMATION:

; APPLICANT: Armentano, Donna

; APPLICANT: Gregory, Richard J.

; APPLICANT: Smith, Alan E.

; TITLE OF INVENTION: CHIMERIC ADENOVIRAL VECTORS

; NUMBER OF SEQUENCES: 3

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Baker & Botts, L.L.P.

; STREET: 30 Rockefeller Plaza

; CITY: New York

; STATE: NY

; COUNTRY: U.S.A.

; ZIP: 10112

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Diskette

; COMPUTER: IBM Compatible

; OPERATING SYSTEM: DOS

; SOFTWARE: FastSEQ Version 2.0

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/752,760A

; FILING DATE: 20-NOV-1996

; CLASSIFICATION: 435

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER:

; FILING DATE:

; ATTORNEY/AGENT INFORMATION:

; NAME: Seide, Rochelle K

; REGISTRATION NUMBER: 32,300

; REFERENCE/DOCKET NUMBER: A31385

; TELECOMMUNICATION INFORMATION:

```

; TELEPHONE: 212-705-5000
;
; TELEFAX: 212-705-5020
;
; TELEX:
;
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 35081 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-752-760A-1

```

Query Match 7.4%; Score 30.6; DB 2; Length 35081;
Best Local Similarity 48.6%; Pred. No. 12;
Matches 84; Conservative 0; Mismatches 89; Indels 0; Gaps 0;

Qy	96	cccaacactccaaaccaacacacttcaaccaaaccaccacaacaatgccttcagtaac	155
Db	16373	CCGACCCCTGGCTCCAGCCTCCACCGCTACCCTTCCACTTCTACCGTCGCCACGGTCAC	16432
Qy	156	ccaggcccgctctcatgtggcgtagcgctgcgcgcggcgatggtagagccccacccttcgc	215
Db	16433	CGAGCCTCCCAGGAGGCGAAGATGGGGCCCCGCCAACCGGCTGATGCCCAACTACGTGTT	16492
Qy	216	tcgcaatcccatcaccatgacccctcaegcctggcgcgccgcgacctctcca	268
Db	16493	GCATCCTTCCATTATCCCAGCGCCGGGCTACCGCGGCACCCGGTACTACGCCA	16545

```

RESULT 15
US-09-103-840A-2
; Sequence 2, Application US/09103840A
; Patent No. 6294328
; GENERAL INFORMATION:
; APPLICANT: FLEISCHMAN, Robert D.
; APPLICANT: WHITE, Owen R.
; APPLICANT: FRASER, Claire M.
; APPLICANT: VENTER, John C.
; TITLE OF INVENTION: DNA SEQUENCES FOR STRAIN ANALYSIS IN MYCOBACTERIUM
; TITLE OF INVENTION: TUBERCULOSIS
; FILE REFERENCE: 24366-20007.00
; CURRENT APPLICATION NUMBER: US/09/103,840A
; CURRENT FILING DATE: 1998-06-24
; NUMBER OF SEQ ID NOS: 2
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
; LENGTH: 4403765
; TYPE: DNA
; ORGANISM: Mycobacterium tuberculosis
; FEATURE:
; OTHER INFORMATION: CDC 1551
; OTHER INFORMATION: "n" bases at various positions throughout the sequence
; OTHER INFORMATION: represent a, t, c or g
US-09-103-840A-2

```

Query Match 7.4%; Score 30.6; DB 4; Length 4403765;

Best Local Similarity 57.6%; Pred. No. 48;
Matches 57; Conservative 0; Mismatches 42; Indels 0; Gaps 0;

Qy 183 cgcccgcgcatggttagagccccacccttcgctcgcaatcccatcaccatgaccctca 242
| | | | | | | | | | | | | | | | | | | | | |
Db 2765925 caccaccgtggtgttcgacgcactccccggcgccgacacggtcatcgacatctccgcca 2765984

Qy 243 cgcttggcgcgcgcgcgcacctctccaagaaagtcgtgaa 281
| | | | | | | | | | | | | | | | | | | | | |
Db 2765985 caccgtgcgcgcgcgcgcacgcctcaacgaccaagacctgga 2766023

Search completed: February 7, 2002, 11:22:20
Job time: 7906 sec

GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.

OM nucleic - nucleic search, using sw model

Run on: February 7, 2002, 08:20:54 ; Search time 4942.22 Seconds
(without alignments)
893.630 Million cell updates/sec

Title: US-09-394-745-6603
Perfect score: 411
Sequence: 1 agcaaaagcatagagatcca.....aggagaagaggaagggaccg 411

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 11351937 seqs, 5372889281 residues

Total number of hits satisfying chosen parameters: 22703874

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : EST:*
1: em_estfun:*
2: em_esthum:*
3: em_estin:*
4: em_estom:*
5: em_estpl:*
6: em_estba:*
7: em_estro:*
8: em_estov:*
9: em_htc:*
10: gb_est1:*
11: gb_est2:*
12: gb_htc:*

```

13: gb_gss:*
14: em_gss_fun:*
15: em_gss_hum:*
16: em_gss_inv:*
17: em_gss_pln:*
18: em_gss_pro:*
19: em_gss_rod:*
20: em_gss_vrt:*
21: em_gss_other:*

```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result			%		Query		DB	ID	Description
	No.	Score	Match	Length	Match	Length			
	1	53.4	13.0	435	11	BI190440		BI190440	ile09fs.r
c	2	52.6	12.8	884	13	CNS006U0		AL065923	Drosophil
	3	52	12.7	939	13	CNS00CNG		AL059400	Drosophil
c	4	51.2	12.5	895	13	CNS0071A		AL066286	Drosophil
	5	46.8	11.4	996	11	BG333443		BG333443	602430365
c	6	44.2	10.8	1101	13	CNS00LT2		AL078714	Drosophil
	7	43.6	10.6	494	10	AA415063		AA415063	Mg0008 RC
	8	43.6	10.6	830	11	BF207170		BF207170	601870887
	9	43.6	10.6	1013	13	CNS016KT		AL106871	Drosophil
c	10	42.8	10.4	922	13	CNS0073W		AL066784	Drosophil
	11	42	10.2	1101	13	CNS016LW		AL106910	Drosophil
	12	41.8	10.2	748	13	CNS011EQ		AL100172	Drosophil
	13	41.6	10.1	1028	13	CNS01FKL		AL141958	Anopheles
	14	41.6	10.1	1344	11	BF973142		BF973142	602242133
	15	41.4	10.1	1737	11	BF868167		BF868167	963101A02
c	16	41	10.0	812	13	AZ183515		AZ183515	SP_1001_A
	17	41	10.0	1139	11	BF859156		BF859156	963001C08
	18	40.8	9.9	632	11	BG320266		BG320266	Zm03_03g0
c	19	40.6	9.9	852	10	AL563901		AL563901	AL563901
	20	40.6	9.9	1101	13	CNS00LO0		AL068607	Drosophil
c	21	40.4	9.8	707	13	AZ199083		AZ199083	SP_1038_B
c	22	40.4	9.8	1064	13	CNS016P9		AL107031	Drosophil
c	23	40.4	9.8	1101	13	CNS00FXE		AL071370	Drosophil
	24	40.2	9.8	692	13	B21282		B21282	T20G4-T7.1
	25	40.2	9.8	860	13	CNS018FL		AL109275	Drosophil
c	26	40.2	9.8	916	13	CNS015SQ		AL105860	Drosophil
	27	40.2	9.8	1003	11	BG180518		BG180518	602331443
c	28	40	9.7	767	13	AZ196564		AZ196564	SP_1032_A
	29	40	9.7	932	13	CNS06KYG		AL403502	T7 end of
c	30	39.8	9.7	772	11	BF627771		BF627771	HVSMEb000
	31	39.8	9.7	902	13	CNS03MHM		AL250771	Tetraodon
	32	39.8	9.7	980	10	AL536103		AL536103	AL536103
c	33	39.8	9.7	1101	13	CNS00ZZK		AL098330	Drosophil
c	34	39.6	9.6	528	11	BG786286		BG786286	SEAUMC006
	35	39.6	9.6	952	13	CNS0766T		AL431019	T7 end of
	36	39.6	9.6	1101	13	CNS016XR		AL107337	Drosophil
	37	39.4	9.6	638	13	CNS046XY		AL277279	Tetraodon
	38	39.4	9.6	1046	13	CNS07BWV		AL438437	T7 end of

c	39	39.4	9.6	1063	13	CNS040FA	AL268831	Tetraodon
c	40	39.4	9.6	1101	13	CNS017ZR	AL108705	Drosophil
c	41	39.2	9.5	363	10	AL534163	AL534163	AL534163
	42	39	9.5	544	13	CNS015XA	AL106024	Drosophil
c	43	39	9.5	798	13	CNS02PA9	AL207738	Tetraodon
c	44	39	9.5	823	10	AL573901	AL573901	AL573901
	45	39	9.5	880	11	BF298281	BF298281	016PbB02

ALIGNMENTS

RESULT 1

BI190440

LOCUS BI190440 435 bp mRNA EST 10-JUL-2001

DEFINITION ile09fs.r1 Fusarium sporotrichioides Tri 10 overexpressed cDNA library Fusarium sporotrichioides cDNA clone ile09fs 5', mRNA sequence.

ACCESSION BI190440

VERSION BI190440.1 GI:14664119

KEYWORDS EST.

SOURCE Fusarium sporotrichioides.

ORGANISM Fusarium sporotrichioides
Eukaryota; Fungi; Ascomycota; Pezizomycotina; Sordariomycetes; Hypocreales; mitosporic Hypocreales; Fusarium.

REFERENCE 1 (bases 1 to 435)

AUTHORS Ren,Q., Tag,A., Peplow,A., Lai,H., Kupfer,C., Peterson,A., Beremand ,M. and Roe,B.

TITLE Analysis of a Fusarium sporotrichioides EST database

JOURNAL Unpublished (2001)

COMMENT Contact: Bruce A. Roe, University of Oklahoma, broe@ou.edu
Department of Chemistry and Biochemistry
Advanced Center for Genome Technology, University of Oklahoma
620 Parrington Oval, Norman, OK 73019, USA
Tel: 405 325 4912
Fax: 405 325 7762
Email: broe@ou.edu
Contact Dr. Marian Beremand regarding clone availability Included is the best homolog from a blastx search of Genbank nr 04-09-01 155 6e-10 gi|12718428|emb|CAC2 (AL513462) putative protein [Neurosporacra
Seq primer: T3
High quality sequence stop: 395.

FEATURES Location/Qualifiers

source 1. .435
/organism="Fusarium sporotrichioides"
/strain="Tri 10"
/db_xref="taxon:5514"
/clone="ile09fs"
/clone_lib="Fusarium sporotrichioides Tri 10 overexpressed cDNA library"
/note="Vector: pBlueScript SK-; Site_1: EcoRI; Site_2: XhoI; 5' end of cDNA cloned into EcoRI site of pBluescript ; 3' end of cDNA cloned into XhoI site of pBluescript"

BASE COUNT 107 a 138 c 76 g 114 t

ORIGIN

Query Match 13.0%; Score 53.4; DB 11; Length 435;
 Best Local Similarity 55.7%; Pred. No. 0.0018;
 Matches 102; Conservative 0; Mismatches 81; Indels 0; Gaps 0;

```

Qy  184 gcccgcggcatggtagagccccacccttcgctcgcaatcccatcaccatgaccctcac 243
      ||| || |   | ||| | ||||| || | ||| |||   || |||
Db  189 GCCGGCCGAGCTATGGAGTCTCACCCCTTCGAGCGTATTCCCCTCACTCAGAAGCCTGCT 248

Qy  244 gcctggcgcgccgcgcgacctctccaagaaagtcgtgaagacaagcactgtcttcttcccc 303
      |   ||| | | | ||| || | |   |   ||||| |||
Db  249 TCTCCTGATTACGCCAAGATGTTCAAGCGAGTTGGCAGCCAGGCCCTCTTCTTCTCCCT 308

Qy  304 ttctatgcaggtatccttggatggccagtcgcagccgcctggtggttcaacggaacatg 363
      || || | ||||| |||| | || || |   || ||| || ||
Db  309 GGCTTCGCTGTCATCCTTGGCTGGCCTTTGGCTGCCAGTATGCCTTTGACGGTAAACTG 368

Qy  364 tga 366
      | |
Db  369 TAA 371
  
```

RESULT 2
 CNS006U0/c
 LOCUS CNS006U0 884 bp DNA GSS 03-JUN-1999
 DEFINITION Drosophila melanogaster genome survey sequence T7 end of BAC #
 BACR14N21 of RPCI-98 library from Drosophila melanogaster (fruit
 fly), genomic survey sequence.
 ACCESSION AL065923
 VERSION AL065923.1 GI:4944891
 KEYWORDS GSS.
 SOURCE fruit fly.
 ORGANISM Drosophila melanogaster
 Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
 Pterygota; Neoptera; Endopterygota; Diptera; Brachycera;
 Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.
 REFERENCE 1 (bases 1 to 884)
 AUTHORS Genoscope.
 TITLE Direct Submission
 JOURNAL Submitted (02-JUN-1999) Genoscope - Centre National de Sequencage :
 BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr
 - Web : www.genoscope.cns.fr)
 COMMENT Determination of this BAC-end sequence was carried out as part of a
 collaboration with the Berkeley Drosophila Genome Project (BDGP).
 The BDGP is constructing a physical map of the Drosophila
 melanogaster genome using these BACs. For further information
 please see <http://www.fruitfly.org> The BDGP Drosophila
 melanogaster BAC library was prepared by Kazutoyo Osoegawa and
 Aaron Mammoser in Pieter de Jong's laboratory in the Department of
 Cancer Genetics at the Roswell Park Cancer Institute in Buffalo,
 NY. The library is named RPCI-98 and was constructed by partial
 EcoRI digestion of Drosophila DNA provided by the BDGP from the
 isogenic strain y2; cn bw sp, the same strain used for the BDGP's
 P1 and EST libraries. A more detailed description of the library
 and how to order individual BAC clones, the entire library, or
 filters for hybridization from the BACPAC Resource Center can be
 found at http://bacpac.med.buffalo.edu/drosophila_bac.htm.

FEATURES Location/Qualifiers
 source 1. .884
 /organism="Drosophila melanogaster"
 /db_xref="taxon:7227"
 /clone_lib="RPCI-98"
 /clone="BACR14N21"
 /note="end : T7"
 BASE COUNT 230 a 62 c 139 g 124 t 329 others
 ORIGIN

Query Match 12.8%; Score 52.6; DB 13; Length 884;
 Best Local Similarity 15.6%; Pred. No. 0.0034;
 Matches 40; Conservative 119; Mismatches 97; Indels 0; Gaps 0;

```

Qy      18 ccatcttctctgctcaatcaattacacaacaagagcattctagatttgagttcatcctag 77
      :::| :: : | : :: :: : ::::: : : : : : : : : : : : :
Db      876 MMHTKKKKKKTTHMMVMNMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM 817

Qy      78 cgataccaatacacccatcccaacactccaaaccaacacacttcaaccaaaccaccac 137
      : : ::::: ::::: : : : : : : : : : : : : : : : : : :
Db      816 MMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMCMMMCMMACCMCMAMMCAMMMMMCM 757

Qy     138 aacaatgccttcagtaacccaggcccgctctcatgtggcgtagcgctcgcccgcgccatggt 197
      ::::: : : : : ||:: |:: | : : : : | : | : : : : :
Db      756 MMMMMCMMMMMCMCMCMCCMMCMCCMMMACACMACACMCACCMMMMACSMMMAC 697

Qy     198 agagccccacccttcgctcgcaatcccatcaccatgaccctcacgcctggcgcgccgc 257
      : : : |::: : : || :|| |:: |||| ||| :| : | || |
Db      696 MCMCMACMMMMMMMAAMMMCCACHMCCAMACCMMMCCCCCMCACCMCMMMCCCCCCC 637

Qy     258 cgacctctccaagaaa 273
      | : : | ||: ||:
Db      636 CMMMMACAACAMCAAM 621

```

RESULT 3
 CNS00CNG
 LOCUS CNS00CNG 939 bp DNA GSS 04-JUN-1999
 DEFINITION Drosophila melanogaster genome survey sequence TET3 end of BAC #
 BACR26H16 of RPCI-98 library from Drosophila melanogaster (fruit
 fly), genomic survey sequence.
 ACCESSION AL059400
 VERSION AL059400.1 GI:4946964
 KEYWORDS GSS.
 SOURCE fruit fly.
 ORGANISM Drosophila melanogaster
 Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
 Pterygota; Neoptera; Endopterygota; Diptera; Brachycera;
 Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.
 REFERENCE 1 (bases 1 to 939)
 AUTHORS Genoscope.
 TITLE Direct Submission
 JOURNAL Submitted (02-JUN-1999) Genoscope - Centre National de Sequencage :
 BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr
 - Web : www.genoscope.cns.fr)
 COMMENT Determination of this BAC-end sequence was carried out as part of a

collaboration with the Berkeley Drosophila Genome Project (BDGP). The BDGP is constructing a physical map of the Drosophila melanogaster genome using these BACs. For further information please see <http://www.fruitfly.org> The BDGP Drosophila melanogaster BAC library was prepared by Kazutoyo Osoegawa and Aaron Mammoser in Pieter de Jong's laboratory in the Department of Cancer Genetics at the Roswell Park Cancer Institute in Buffalo, NY. The library is named RPCI-98 and was constructed by partial EcoRI digestion of Drosophila DNA provided by the BDGP from the isogenic strain y2; cn bw sp, the same strain used for the BDGP's P1 and EST libraries. A more detailed description of the library and how to order individual BAC clones, the entire library, or filters for hybridization from the BACPAC Resource Center can be found at http://bacpac.med.buffalo.edu/drosophila_bac.htm.

```
FEATURES             Location/Qualifiers
    source             1. .939
                       /organism="Drosophila melanogaster"
                       /db_xref="taxon:7227"
                       /clone_lib="RPCI-98"
                       /clone="BACR26H16"
                       /note="end : TET3"
BASE COUNT           71 a    349 c    104 g    180 t    235 others
ORIGIN
```

```
Query Match          12.7%;  Score 52;  DB 13;  Length 939;
Best Local Similarity 16.0%;  Pred. No. 0.0049;
Matches 40;  Conservative 119;  Mismatches 91;  Indels 0;  Gaps 0;
```

```
Qy      18 ccattcttctctgctcaatcaattacacaacaagagcattctagatttgagttcatcctag 77
      :: ::| | : : :: :: : :: :: :: :: ::| :: : | | : : |::
Db      378 MMCHMTCCMMMMMMMMMMMMMMMMMTMHMMMMMMMMMMMMTMMHMMMMTTMMHAMTMMCMTMT 437

Qy      78 cgataccaatacacccatcccaacactccaaaccaacacacttcaaccaaaccaccac 137
      : : :::: |:: :::: :::: :::: :::: :::: :::: :::: :::: ::::
Db      438 MMMMMMMMTTMMTMMMMMMMMMMMMMMMMTMMMMMMMMTMMMMMMMMTMMHMMMMMMHHMT 497

Qy      138 aacaatgcottcagtaacccaggcccgctctcatgtggcgtagcgctcgcccgcgccatggt 197
      :::: :: : : :::: :: : |: :: : |: : : : : : :
Db      498 MMMMMHMMMMMMHTHHMMMMMMMMMTMMMTMMMMMMMMMMMMTMMMHMMMMMMMMMMHHMM 557

Qy      198 agagccccaccccttcgctcgcaatcccatcaccatgaccctcacgcctggcgcgccgc 257
      : : |::: :: || || | || | | || || | || || || |
Db      558 MMMMCMMMMMTTMTCCGTCTCTCTCTCCCGTGCCCTGCCCTTCTTGTTGGCCCGTCTG 617

Qy      258 cgacctctcc 267
      | |||| ||
Db      618 GGCCCTCCCC 627
```

```
RESULT      4
CNS0071A/c
LOCUS      CNS0071A      895 bp      DNA      GSS      03-JUN-1999
DEFINITION  Drosophila melanogaster genome survey sequence TET3 end of BAC #
            BACR14B09 of RPCI-98 library from Drosophila melanogaster (fruit
            fly), genomic survey sequence.
ACCESSION  AL066286
```



```

VERSION      AL066286.1   GI:4945153
KEYWORDS     GSS.
SOURCE       fruit fly.
ORGANISM     Drosophila melanogaster
              Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
              Pterygota; Neoptera; Endopterygota; Diptera; Brachycera;
              Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.
REFERENCE    1 (bases 1 to 895)
AUTHORS      Genoscope.
TITLE        Direct Submission
JOURNAL      Submitted (02-JUN-1999) Genoscope - Centre National de Sequencage :
              BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr
              - Web : www.genoscope.cns.fr)
COMMENT      Determination of this BAC-end sequence was carried out as part of a
              collaboration with the Berkeley Drosophila Genome Project (BDGP).
              The BDGP is constructing a physical map of the Drosophila
              melanogaster genome using these BACs. For further information
              please see http://www.fruitfly.org The BDGP Drosophila
              melanogaster BAC library was prepared by Kazutoyo Osoegawa and
              Aaron Mammoser in Pieter de Jong's laboratory in the Department of
              Cancer Genetics at the Roswell Park Cancer Institute in Buffalo,
              NY. The library is named RPCI-98 and was constructed by partial
              EcoRI digestion of Drosophila DNA provided by the BDGP from the
              isogenic strain y2; cn bw sp, the same strain used for the BDGP's
              P1 and EST libraries. A more detailed description of the library
              and how to order individual BAC clones, the entire library, or
              filters for hybridization from the BACPAC Resource Center can be
              found at http://bacpac.med.buffalo.edu/drosophila\_bac.htm.
FEATURES     Location/Qualifiers
              source          1. .895
                               /organism="Drosophila melanogaster"
                               /db_xref="taxon:7227"
                               /clone_lib="RPCI-98"
                               /clone="BACR14B09"
                               /note="end : TET3"
BASE COUNT   124 a          80 c          204 g          179 t          308 others
ORIGIN

```

Qy	4	aaaagcatagagatccatcttctctgctcaatcaattacacaacaagagcatttctagatt	63
		::: : : : : : : : :: : : :	
Db	650	MMAMCCAMMCACAMMAMCMMCCCCACMMCACCCMMMCMCAMAMMAMCACMMCAMCACM	591
Qy	64	tgagttcatcctagcgataccaatacacccatcccaacactccaaaccaaccaacacttc	123
		: : : : :: ::: : : ::: : :: : :	
Db	590	MMAMCMCAMMMAMCMAMMMMAAMACACMMMCCAMAMMCMMMMMMACMCACMMCCAMMAM	531
Qy	124	aaccaaaaccaccacaacaatgccttcagtaacccaggcccgtctcatgtggcgtagcgtc	183
		::: ::: :: ::: : :::: : : : :	
Db	530	MMMMAMMMCCMMMCMCMCMCCCCCMMMMMMMMMAMCCAMMAAMMCMCMCMCCCMCMAC	471
Qy	184	gcccgcggcatggttagagccccacccttcgctcgcaatcccatcaccatgaccctcac	243
		: : : : : : :	

Matches 105; Conservative 0; Mismatches 97; Indels 0; Gaps 0;

```
Qy      66 agttcatcctagcgataccaatacacccatcccaacactccaaaccaaccaacacttcaa 125
      | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      783 ATTGCCCCCTCCCCCTCCCAACCAACCCACCTCCCCACATCTGTCCCACCCCCACCTCAC 842

Qy     126 ccaaaccaccacaacaatgccttcagtaacccaggcccggtctcatgtggcgtagcgtcgc 185
      || | | | | | | | | | | | | | | | | | | | | | | | | | |
Db     843 CCCCCTACACCACCTAACCCCTCATCACCCCAACCCCCCCCCACGCCCCCTCCCCCAC 902

Qy     186 ccgcggcatggtagagccccaccccttcgctcgcaatcccatcaccatgacccctcacgc 245
      || | | | | | | | | | | | | | | | | | | | | | | | | | |
Db     903 CCCCCACCTCCCCCACACCCACCCCTCCCCCAACCCCCCCCCCTTCCTCCCCCCCC 962

Qy     246 ctggcgcgccgacgtctcc 267
      | | | | | | | | | | | | | | | | | | | | | | | | | |
Db     963 CCCCTCCCCCCCCCCCCCCCCCCC 984
```

RESULT 6
CNS00LT2/c
LOCUS CNS00LT2 1101 bp DNA GSS 14-JUN-1999
DEFINITION Drosophila melanogaster genome survey sequence TET3 end of BAC:
BACR48P19 of RPCI-98 library from Drosophila melanogaster (fruit
fly), genomic survey sequence.
ACCESSION AL078714
VERSION AL078714.1 GI:5102004
KEYWORDS GSS.
SOURCE fruit fly.
ORGANISM Drosophila melanogaster
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera;
Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.
REFERENCE 1 (bases 1 to 1101)
AUTHORS Genoscope.
TITLE Direct Submission
JOURNAL Submitted (11-JUN-1999) Genoscope - Centre National de Sequencage :
BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr
- Web : www.genoscope.cns.fr)
COMMENT Determination of this BAC-end sequence was carried out as part of a
collaboration with the Berkeley Drosophila Genome Project (BDGP).
The BDGP is constructing a physical map of the Drosophila
melanogaster genome using these BACs. For further information
please see <http://www.fruitfly.org> The BDGP Drosophila
melanogaster BAC library was prepared by Kazutoyo Osoegawa and
Aaron Mammoser in Pieter de Jong's laboratory in the Department of
Cancer Genetics at the Roswell Park Cancer Institute in Buffalo,
NY. The library is named RPCI-98 and was constructed by partial
EcoRI digestion of Drosophila DNA provided by the BDGP from the
isogenic strain y2; cn bw sp, the same strain used for the BDGP's
P1 and EST libraries. A more detailed description of the library
and how to order individual BAC clones, the entire library, or
filters for hybridization from the BACPAC Resource Center can be
found at http://bacpac.med.buffalo.edu/drosophila_bac.htm.
FEATURES Location/Qualifiers
source 1. .1101
/organism="Drosophila melanogaster"

/db_xref="taxon:7227"
/clone_lib="RPCI-98"
/clone="BACR48P19"
/note="end : TET3"

BASE COUNT 469 a 6 c 69 g 151 t 406 others
ORIGIN

Query Match 10.8%; Score 44.2; DB 13; Length 1101;
Best Local Similarity 13.0%; Pred. No. 0.48;
Matches 39; Conservative 141; Mismatches 121; Indels 0; Gaps 0;

```
Qy      3  caaaagcatagagatccatcttctctgctcaatcaattacacaacaagagcattctagat 62
          : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db    1032  MMMMMMMMAMMMAMMMMMMMMMMATT TTTTHMMAMAMMMHMMMMMMMMMATTHAWHTTTTHT 973

Qy     63  ttgagttcatcctagcgcataccaatacacccatcccaacactccaaaccaaccaacactt 122
          || :    |:| :|: : : : :|:| :|:|:|:|:|:|:|:|:|:|:|:|:|:|:|
Db     972  TTYMMAMCMTTHTMMMMMMMMMAMMAMMMCCMCMCMCCMMMMCCCCMCMMMMMCMMMTT 913

Qy    123  caaccaaaccaccacaacaatgccttcagtaacccaggcccggtctcatgtggcgtagcgt 182
          : : : : |:|:| : : :| : : : : : : : : :| : : : :| :
Db     912  TTHHHMMCCMCMCMCCCMCMCMCMMMMACMMMMMTTTHMMCCMMMMMMMMMMMAAMMMA 853

Qy    183  cgcccgcgcatggtagagccccaccccttcgctcgcaatcccatcaccatgacccctca 242
          : : : : : : | : : :|:|:|:| : : : : : : : :| : : : :
Db     852  MMMMMCMHMAMMTTTTTTTTTHWMAMMAYHTTMMMTTMMMMMMCMMMMAAAATTMMMMMM 793

Qy    243  cgcccgcgcgcgccgcgcgacctctccaagaaagtcgtgaagacaagcactgtcttcttccc 302
          :| : : : : :| | : : : : : : : : : : : : : :| :| : :
Db     792  AMHMTTHHCTMMCMCMCWCCMCMMMMMMMCCMMCMCMCMCMCCMMYHMMHTTTWTMM 733

Qy    303  c 303
          :
Db     732  H 732
```

RESULT 7
AA415063
LOCUS AA415063 494 bp mRNA EST 09-DEC-1999
DEFINITION Mg0008 RCW Lambda Zap Express Library Magnaporthe grisea cDNA clone
 RCW8 3', mRNA sequence.
ACCESSION AA415063
VERSION AA415063.1 GI:2537242
KEYWORDS EST.
SOURCE Magnaporthe grisea.
ORGANISM Magnaporthe grisea
 Eukaryota; Fungi; Ascomycota; Pezizomycotina; Sordariomycetes;
 Sordariomycetes incertae sedis; Magnaporthaceae; Magnaporthe.
REFERENCE 1 (bases 1 to 494)
AUTHORS Wu,S.-C., Bernstein,B.D., Darvill,A.G. and Albersheim,P.
TITLE Expressed sequence tags of the rice blast fungus grown on rice cell
 walls
JOURNAL Unpublished (1997)
COMMENT Contact: Sheng-Cheng Wu
 CCRC
 University of Georgia

Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
cDNA Library Preparation: Ling Hong/Rubin Laboratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov
Plate: LLCM973 row: m column: 21
High quality sequence stop: 343.

FEATURES Location/Qualifiers
 source 1. .830
 /organism="Homo sapiens"
 /db_xref="taxon:9606"
 /clone="IMAGE:4101692"
 /clone_lib="NIH_MGC_19"
 /tissue_type="neuroblastoma"
 /lab_host="DH10B (phage-resistant)"
 /note="Organ: brain; Vector: pOTB7; Site_1: XhoI; Site_2: EcoRI; cDNA made by oligo-dT priming. Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCACGAG(G). Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies). Note: this is a NIH_MGC Library."

BASE COUNT 145 a 460 c 152 g 73 t
ORIGIN

Query Match 10.6%; Score 43.6; DB 11; Length 830;
Best Local Similarity 52.2%; Pred. No. 0.64;
Matches 97; Conservative 0; Mismatches 89; Indels 0; Gaps 0;

```

Qy      82  accaatacacccatcccaacactccaaaccaacacacttcaaccaaaccaccacaaca 141
          ||||  | |||  ||| || |  || |||  ||||  | |  |  ||  |||  |||  ||
Db      590  ACCACCCCCCCCCCCCCACCCACACACCCACCACCCCAACCCCGCCCCATCACACCA 649

Qy     142  atgccttcagtaacccaggcccggtctcatgtggcgtagcgctcgcccgcgccatggttagag 201
          |||  |  ||||  ||  ||  |  ||  |  |  |  |  |  |  |  |
Db      650  TCACCTCAGCCACCCACCAGCCCGCCCCCGCCCCCGCCACCACCCCCCCCCACCA 709

Qy     202  cccacccccttcgctcgcaatcccatcaccatgacccctcacgcctggcgcgccgccgac 261
          ||||  ||||  | | |||  |||  ||  ||||  | | ||  | | || | ||
Db      710  CCCCTCCCCACCCCGCCCCACCCCCCCCCCCCCACCCCCCCCCACACCCCCCCCCCAC 769

Qy     262  ctctcc 267
          | | | |
Db      770  CCCCCC 775

```

RESULT 9
CNS016KT
LOCUS CNS016KT 1013 bp DNA GSS 26-JUL-1999
DEFINITION Drosophila melanogaster genome survey sequence SP6 end of BAC BACN16J16 of DrosBAC library from Drosophila melanogaster (fruit fly), genomic survey sequence.
ACCESSION AL106871

VERSION AL106871.1 GI:5624218
 KEYWORDS GSS.
 SOURCE fruit fly.
 ORGANISM Plasmid Drosophila melanogaster
 Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
 Pterygota; Neoptera; Endopterygota; Diptera; Brachycera;
 Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.
 REFERENCE 1 (bases 1 to 1013)
 AUTHORS Genoscope.
 TITLE Direct Submission
 JOURNAL Submitted (23-JUL-1999) Genoscope - Centre National de Sequencage :
 BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr
 - Web : www.genoscope.cns.fr)
 COMMENT Determination of this BAC-end sequence was carried out as part of a
 collaboration with the European Drosophila Genome Project (EDGP) -
 http://www.edgp.ebi.ac.uk -. This Drosophila melanogaster BAC
 library (Dros BAC) was made by Alain Billaud at CEPH (Centre
 d'Etude du Polymorphisme Humain) with funding provided by a MRC
 project grant. The DNA was prepared from embryos by Alain Bucheton
 and Genevieve Payan. It has been constructed in the vector
 pBeloBAC11.
 FEATURES Location/Qualifiers
 source 1. .1013
 /organism="Drosophila melanogaster"
 /plasmid="pBeloBAC11"
 /db_xref="taxon:7227"
 /clone_lib="DrosBAC"
 /clone="BACN16J16"
 /note="end : SP6"
 BASE COUNT 132 a 191 c 148 g 131 t 411 others
 ORIGIN

Query Match 10.6%; Score 43.6; DB 13; Length 1013;
 Best Local Similarity 16.3%; Pred. No. 0.67;
 Matches 53; Conservative 111; Mismatches 162; Indels 0; Gaps 0;

Qy 22 cttctctgctcaatcaattacacaacaagagcattctagatttgagttcatcctagcgat 81
 | | ||| ::: : |::| : :: : : : : : : : :
 Db 221 CNMCCCTGTNMMMMCMCMCCMSMCCMTMMSCCNMNCMMYSCSCCCCMGMMMMCMNMM 280
 Qy 82 accaatacacccatcccaacactccaaaccaacacattcaaccaaacaccacacaaca 141
 :| : ::::: : : | : : | : : : : ||::: : : : :
 Db 281 CMCCMNNMMMSMMMVMNMNCGMGMTAMCMTGNNTNGMMGTTHMMMGNTTTMNGMGGMN 340
 Qy 142 atgccttcagtaacccaggcccggtctcatgtggcgtagcgtagcgccgcggcatggttagag 201
 |: : : : : : : ||:| :|: || : : : :
 Db 341 GNGMNNNNCNGMNNNNMMMMMMMMMGCMGGGGMGMGMNTCTTGMMGMCNMGMCMNMMNC 400
 Qy 202 cccaccccttcgctcgcaatcccatcaccatgacccctcacgcctggcgcgccgac 261
 :|::: : : : : :|::|::: :|:: : : :| : :| : :
 Db 401 MCMNN 460
 Qy 262 ctctccaagaaagtcgtgaagacaagcactgtcttcttcccttctatgcaggtatcctt 321
 | |: :|: | :| :| ||: |:|:| | : | :| :| :
 Db 461 NTGCMNMGMGNGNGGNGGNGGNNMGGTCTYCKTTYCTYCCCGGCGSCKTTTCTSTKCTK 520

Qy 322 ggatggccagtcgcagccgcctggtg 347
 :: || | |::|: : :: : ||
 Db 521 KKCTGTCTGGKSGSCCBGSGCSTTG 546

RESULT 10

CNS0073W/c

LOCUS CNS0073W 922 bp DNA GSS 03-JUN-1999
 DEFINITION Drosophila melanogaster genome survey sequence TET3 end of BAC #
 BACR14D09 of RPCI-98 library from Drosophila melanogaster (fruit
 fly), genomic survey sequence.

ACCESSION AL066784

VERSION AL066784.1 GI:4945247

KEYWORDS GSS.

SOURCE fruit fly.

ORGANISM Drosophila melanogaster

Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
 Pterygota; Neoptera; Endopterygota; Diptera; Brachycera;
 Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.

REFERENCE 1 (bases 1 to 922)

AUTHORS Genoscope.

TITLE Direct Submission

JOURNAL Submitted (02-JUN-1999) Genoscope - Centre National de Sequencage :
 BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr
 - Web : www.genoscope.cns.fr)

COMMENT Determination of this BAC-end sequence was carried out as part of a
 collaboration with the Berkeley Drosophila Genome Project (BDGP).
 The BDGP is constructing a physical map of the Drosophila
 melanogaster genome using these BACs. For further information
 please see <http://www.fruitfly.org> The BDGP Drosophila
 melanogaster BAC library was prepared by Kazutoyo Osoegawa and
 Aaron Mammoser in Pieter de Jong's laboratory in the Department of
 Cancer Genetics at the Roswell Park Cancer Institute in Buffalo,
 NY. The library is named RPCI-98 and was constructed by partial
 EcoRI digestion of Drosophila DNA provided by the BDGP from the
 isogenic strain y2; cn bw sp, the same strain used for the BDGP's
 P1 and EST libraries. A more detailed description of the library
 and how to order individual BAC clones, the entire library, or
 filters for hybridization from the BACPAC Resource Center can be
 found at http://bacpac.med.buffalo.edu/drosophila_bac.htm.

FEATURES

source

Location/Qualifiers

1. .922

/organism="Drosophila melanogaster"

/db_xref="taxon:7227"

/clone_lib="RPCI-98"

/clone="BACR14D09"

/note="end : TET3"

BASE COUNT 223 a 95 c 109 g 221 t 274 others

ORIGIN

Query Match 10.4%; Score 42.8; DB 13; Length 922;
 Best Local Similarity 22.2%; Pred. No. 1;
 Matches 65; Conservative 105; Mismatches 119; Indels 4; Gaps 1;

Qy 1 agcaaaagcatagagatccatcttctctgctcaatcaattacacaacaagagcattctag 60
 | ::| :: : : | ::| | : | : ::| :: : ::|::| | :: :


```

Db      855 AMNMMMACMMMMCMMACMMAMCCMMACMMMAMAMMMMMMMAMMAMCACMAMMMACACMC 796
Qy      61 atttgagttcatcctagcgataccaatacacccatcccaacactccaaaccaaccaacac 120
      |      :: :: : | : :||| :||| |: :||::|:: ::| :|::| :|::|:
Db      795 AMMMCMMMMMMMMMCMCMCMCCACMMMACACMAMCCMMCMCMMACMCMMAAMAAMMM 736
Qy     121 ttcaaccaaaccaccacaacaatgccttcagtaaccc----aggcccgctctcatgtggcg 176
      ||:: :|:::|::|:|::| : : : :||: | : : | : :
Db      735 MACAMMAMAAMMMMMAMAAMMAAMMAAMMMAMMCCMCCMAAMAMAMMACMMCMCAMMM 676
Qy     177 tagcgctcgcccgcggcgatggtagagccccaccccttcgctcgcaatcccatcaccatgac 236
      : | : : : : : | | :|:|::|: : : :| :|:| :| : : |
Db      675 MMMCAMMMMMAMMAMMMCCCAACAMMCMCACMMCMCAAMAMMMMACMMMAMMAAMMACMC 616
Qy     237 ccctcacgcctggcgcgccgcccgcacctctccaagaaagtcgtgaagacaagca 289
      : ||| | :| | :|| :|| :|| :|| :|| :|| :|| :|| :||
Db      615 AAMMCACAAAMMACMCMCMCASACACAMVMRAAMMMCCCASAMAAMMAMMA 563

```

RESULT 11

CNS016LW

LOCUS CNS016LW 1101 bp DNA GSS 26-JUL-1999

DEFINITION Drosophila melanogaster genome survey sequence T7 end of BAC BACN16J16 of DrosBAC library from Drosophila melanogaster (fruit fly), genomic survey sequence.

ACCESSION AL106910

VERSION AL106910.1 GI:5624430

KEYWORDS GSS.

SOURCE fruit fly.

ORGANISM Plasmid Drosophila melanogaster

Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta; Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.

REFERENCE 1 (bases 1 to 1101)

AUTHORS Genoscope.

TITLE Direct Submission

JOURNAL Submitted (23-JUL-1999) Genoscope - Centre National de Sequencage : BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr - Web : www.genoscope.cns.fr)

COMMENT Determination of this BAC-end sequence was carried out as part of a collaboration with the European Drosophila Genome Project (EDGP) - <http://www.edgp.ebi.ac.uk> -. This Drosophila melanogaster BAC library (Dros BAC) was made by Alain Billaud at CEPH (Centre d'Etude du Polymorphisme Humain) with funding provided by a MRC project grant. The DNA was prepared from embryos by Alain Bucheton and Genevieve Payan. It has been constructed in the vector pBeloBAC11.

FEATURES

source

Location/Qualifiers

1. .1101

/organism="Drosophila melanogaster"

/plasmid="pBeloBAC11"

/db_xref="taxon:7227"

/clone_lib="DrosBAC"

/clone="BACN16J16"

/note="end : T7"

BASE COUNT 222 a 80 c 146 g 113 t 540 others

ORIGIN

Query Match 10.2%; Score 42; DB 13; Length 1101;
 Best Local Similarity 11.8%; Pred. No. 1.7;
 Matches 41; Conservative 128; Mismatches 173; Indels 4; Gaps 1;

```

Qy      34 atcaattacacaacaagagcattctagatttgagttcatcctagcgataccaatacaccc 93
      :      :      :      :      :      :      :      :      :      :
Db      517 MNNNNNNNNNNNNNNNNNNMMGGMGNNNNNNNNNNMCNMMTNNNNNNNNNNNNNNNNNTNNNTNMNTT 576

Qy      94 atcccaacactccaaaccaaccaacacttcaaccaaaccaccacaacaatgccttcagta 153
      :      :      :      :      :      :      :      :      :      :
Db      577 NNNNNNNNNMCMNNNNNNNNNNMCMNNNNNNNNNNMCMNNNNNNNNNNNNNNNNNNNNNNNN 636

Qy     154 acccaggcccgctctcatgtggcgtagcgtagcgccgcggcatggtagagccccacccttc 213
      :      :      :      :      :      :      :      :      :      :
Db      637 MNNNNNNNNNNMCMNNMGNCNNNNNNNNNNCNCNNNNNNNNNNMCMNNNNNNNNNNNNNNNN 696

Qy     214 gctcgcaatcccatcaccatgaccctcacgcctggcgcgccgcgcgacctctccaagaaa 273
      :      :      :      :      :      :      :      :      :      :
Db      697 NNNNNNNNNMCMNNNNNNNNNNMCMNNNNNNNNNNMCMNNNNNNNNNNNNNNNNNNNNNNNN 756

Qy     274 gtcgtgaagacaagcactgtcttcttcccttctatgcaggtatccttgatggccagtc 333
      ||: :      :||: :||: :||: :||: :||: :||: :||: :||: :||: :||:
Db      757 GTMMKMKMGHMTG----WGTGKTMGHMMNNMDTMTKMVMKTTTMMAGMMRNVGMAKGT 812

Qy     334 gcagccgcctggtggttcaacggaaacatgtgactcttccaaatgg 379
      :||: :      :||: :||: :||: :||: :||: :||: :||: :||:
Db      813 MTWGVMMVRKMMVDMGTRGTGHHGMMKWTVTGMGTAKKGTNGMTGD 858
  
```

RESULT 12

CNS011EQ
 LOCUS CNS011EQ 748 bp DNA GSS 26-JUL-1999
 DEFINITION Drosophila melanogaster genome survey sequence SP6 end of BAC
 BACN06J14 of DrosBAC library from Drosophila melanogaster (fruit
 fly), genomic survey sequence.
 ACCESSION AL100172
 VERSION AL100172.1 GI:5611783
 KEYWORDS GSS.
 SOURCE fruit fly.
 ORGANISM Plasmid Drosophila melanogaster
 Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
 Pterygota; Neoptera; Endopterygota; Diptera; Brachycera;
 Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.
 REFERENCE 1 (bases 1 to 748)
 AUTHORS Genoscope.
 TITLE Direct Submission
 JOURNAL Submitted (23-JUL-1999) Genoscope - Centre National de Sequencage :
 BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr
 - Web : www.genoscope.cns.fr)
 COMMENT Determination of this BAC-end sequence was carried out as part of a
 collaboration with the European Drosophila Genome Project (EDGP) -
 http://www.edgp.ebi.ac.uk -. This Drosophila melanogaster BAC
 library (Dros BAC) was made by Alain Billaud at CEPH (Centre
 d'Etude du Polymorphisme Humain) with funding provided by a MRC
 project grant. The DNA was prepared from embryos by Alain Bucheton

and Genevieve Payan. It has been constructed in the vector pBeloBAC11.

```
FEATURES             Location/Qualifiers
    source             1. .748
                        /organism="Drosophila melanogaster"
                        /plasmid="pBeloBAC11"
                        /db_xref="taxon:7227"
                        /clone_lib="DrosBAC"
                        /clone="BACN06J14"
                        /note="end : SP6"
BASE COUNT      174 a      349 c      35 g      62 t      128 others
ORIGIN
```

Query Match 10.2%; Score 41.8; DB 13; Length 748;
Best Local Similarity 44.1%; Pred. No. 1.8;
Matches 100; Conservative 15; Mismatches 112; Indels 0; Gaps 0;

```
Qy      82 accaatacacccatcccaacactccaaaccaaacacttcaaccaaaccaccacaaca 141
      ||:| : |||| ||| | | || ||| | | |||| ||| ||| |
Db      134 ACSACCCMSCCCACACCACCCSCCCSCACCCCAACSACCCCAAACCCCCCAACACCCCC 193

Qy      142 atgccttcagtaaccacaggcccggtctcatgtggcgtagcgtcgcccgcgccatggttagag 201
      || || |:|| |:|: || | | ||| | || |
Db      194 CACCCCSCAASCASSCAACSSSCACCAACCCCCCCCCCAACCCCCCCCCCACCCCCCAA 253

Qy      202 cccacccccttcgctcgcaatcccatcaccatgacccctcacgcctggcgcgccgac 261
      ||||| ||| : | || |||| |||: || | |:| : |:|:| |
Db      254 CCCCACCCCAAMCCCACCACCCCAACACSCCCACAACCASCSCCACSAAACSCSCCCCC 313

Qy      262 ctctccaagaaagtcgtgaagacaagcactgtcttcttcccttcta 308
      | | | |: | | |||| | | |:| | |
Db      314 ACCSCCCACSCASCASCACCCCAACCACCCACCCCCCSCCCCCAA 360
```

RESULT 13

CNS01FKL

LOCUS CNS01FKL 1028 bp DNA GSS 01-JUN-2001

DEFINITION Anopheles gambiae GSS T7 end of clone 04L01 of NotreDamel library from strain PEST of Anopheles gambiae (African malaria mosquito), genomic survey sequence.

ACCESSION AL141958

VERSION AL141958.1 GI:7000076

KEYWORDS GSS.

SOURCE African malaria mosquito.

ORGANISM Anopheles gambiae

Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pterygota; Neoptera; Endopterygota; Diptera; Nematocera;
Culicoidea; Anopheles.

REFERENCE 1 (bases 1 to 1028)

AUTHORS Genoscope.

TITLE Direct Submission

JOURNAL Submitted (16-FEB-2000) Genoscope - Centre National de Sequencage :
BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr
- Web : www.genoscope.cns.fr)

REFERENCE 2 (bases 1 to 1028)

AUTHORS Roth,C.W., Brey,P.T., Ke,Z., Collins,F.H. and Weissenbach,J.

Search completed: February 7, 2002, 08:20:58
Job time: 18135 sec